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KANT'S

CRITICAL PHILOSOPHY.

KANT'S

CRITICAL PHILOSOPHY

FOR ENGLISH READERS.

BY

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A·D 1591

VOL. I.

THE ÆSTHETIC AND ANALYTIC.

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PREFACE.

THE present work is intended to replace my translation of Kuno Fischer's Commentary on Kant's Philosophy, which is now nearly out of print. For though that Commentary, modified and corrected by many notes, was generally accepted in England as a fair exposition of the *Critick*, I am now persuaded that many more corrections were necessary, and that a Second Edition must contain throughout two expositions, one in the text, and another in the notes. It seemed therefore better to yield to the advice of many competent friends, and produce an independent work, profiting where I could by the German commentaries, but presenting to the reader a consistent and uniform text. I have adhered much more faithfully than Kuno Fischer, or indeed any other Commentator I have met, to Kant's text, which I have followed paragraph by paragraph, shortening and simplifying, but shirking no difficulties. I have also marked all my own reflections with an asterisk, which refers only to the paragraph or chapter to which it is prefixed. It seems more advisable to do this than to encumber the book with foot-notes, which interrupt the reader's train of thought.

In the preface to my former work I hinted at the fancy for philosophical novelties in England, and endeavoured to call attention to Kant, as of all modern Germans the greatest philosopher, and certainly the best adapted for practical minds. At all events it is absurd to begin the study of Schelling or Hegel without a prior intimacy with Kant, and how many men are there now in England who thoroughly understand the Critical Philosophy? It is also a remarkable fact that within the last few years, philosophy even in Germany has reverted, as I ventured to predict, from modern extravagance to the soberness of Kant. Schelling and Hegel are forgotten; their works are not even in circulation; while controversies about Kant are agitating all the schools in Germany. His works are being reprinted, illustrated, and attacked, on all sides. The sensual school have discovered that the refutation of Kant alone will give them a lawful victory, and to this task they are applying all their energies.

I hope to give in the second part of the first volume some account of these recent German controversies on Kant. In the part now published I have confined myself to the English school which stands opposed to him, and have submitted the views of the now fashionable Association School to a careful criticism. The influence of Mr. Grote and Mr. Mill, and the constant appointment of Mr. Bain as a State Examiner in Philosophy, have brought this way of thinking into undue prominence. All the youth of the country are being crammed with Mr. Bain's handbooks, and have neither time nor inducement to read an antidote. We must therefore look to the Universities for a fair hearing, and trust that there at least enlightened teachers will not accept as true what the State has made fashionable.. The consideration which my former book received from this more competent public, encourages me to hope that my controversial chapter on Mr. Mill and Mr. Bain will be either openly accepted, or refuted by argument. A lazy half-assent on such matters is of all things the most disheartening to an author, and the worst sign of the condition of Philosophy. I have to complain of this treatment at the hands of Mr. Lewes and Mr. Mill. The most important contribution to the better understanding of Kant, in my Edition of Kuno Fischer,[1] was the true explanation of Kant's refutation of idealism. A patent absurdity had been universally attributed to him, and I showed that his attitude had been totally misconceived. My argument was candidly accepted by both the above competent critics,[2] to whom I am much indebted for their general estimate of my book. Yet in a subsequent chapter (p. 190), Mr. Mill makes a statement distinctly charging Kant with the old absurdity. So Mr. Lewes, accepting my argument that the additions made to objects by sensibility have no claim to a separate existence (p. 544, *note*), leaves in a previous page (p. 538) a statement directly inconsistent with it.

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[1] Introd., pp. xlix.-li.

[2] *Mill on Hamilton*, p. 36, *note;* Lewes' *Hist. of Philosophy*, i., p. 544.

Such complaints were out of place, but for the friendly treatment I had received from these authors; and I sincerely trust that my sharply expressed differences from their opinions will be understood in a strictly philosophical sense, and not as implying any disrespect for their ability or earnestness.

It will appear strange to say that this study in German metaphysic is the work of stray leisure moments, and yet it is so; and I must plead my numerous and exacting official duties, not indeed to cloak any defects in the matter of the book, but for any negligences which a more careful revision of my proof-sheets might have removed. I had indeed the constant kind help of Dr. Toleken and Mr. Monck, two critics of the highest ability and learning, who corrected many errors, and made many suggestions; but rather in the substance than in the form. And I fear that a constant reading of Kant's clumsy periods is likely to react upon his commentator, and blunt the sense of clearness, and of the terseness so essential in explaining a difficult subject. While I plead these difficulties and acknowledge these defects, I still hope that this book will be found a fuller and better exposition of Kant's *Critick* than those even of my German predecessors. It is a common mistake to think that because a man writes in German or holds a chair in a German University, he must therefore know more of this subject than one of ourselves. The most brilliant of the German Commentators is certainly Kuno Fischer, and yet it is now generally acknowledged that he is rather a *doctrinaire* than a Commentator, and that he tries to support his own views by discovering them in Kant. My former work contains ample proof of the assertion.

The scanty time at my disposal prompted me to bring out the work in instalments. I trust the second part of the first volume, containing the Analytic, will be ready next winter. The second volume, containing the Dialectic, will follow as soon as I can arrange the materials, which are long since sifted and prepared. The third volume is an independent book, containing *pièces justificatives*, and bringing before the English reader Kant's own compendious sketch of the chief points in his *Critick.*

It appears almost simultaneously with the present instalment, and can be obtained separately.

As the work is intended for English readers, I have referred uniformly to the translation of Kant's *Critick* in Bohn's Library, and to my own Edition of Kuno Fischer's Commentary. I may add that my other references are to the latest editions of the respective books, viz., the Sixth Edition of Mr. Mill's *Logic*, and the Third of his *Examination of Hamilton*, and the Fourth Edition of Mr. Lewes' *History of Philosophy*.

I conclude this Preface with the earnest hope that the many readers of my former book will find in this a maturer and clearer exposition of the same views.

TRINITY COLLEGE, DUBLIN,
March 16th, 1872.

CORRIGENDA.

Page 81, line 1, *for* anywhere, *read* merely.
,, 96, ,, 13, *dele* (A.)

PART I.

THE AESTHETIC,

WITH A CONTROVERSIAL CHAPTER ON THE EMPIRICAL DERIVATION OF SPACE.

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A CRITICAL COMMENTARY,

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CHAPTER I.

THE TWO PREFACES.

§ 1.* The philosophical student who has been discouraged from opening the Critick of the Pure Reason, by its reputation for obscurity and difficulty, will be agreeably surprised by the clearness and the elegance of Kant's first Preface. So easy is the flow of thought, so felicitous the choice of expression, that we can only find stray hints of the arduous task that awaits us. The explanations of a commentator are almost needless, and his analysis cannot do better than adhere as closely as possible to the rich and suggestive language of the great philosopher himself.[1]

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[1] Mr. Lewes' remarks (*History of Philosophy*, ii., p. 458) are in the first place too severe, and in the second place unjust, as they omit to mention the genuine and even sublime eloquence of some of Kant's writings. I may notice that Kuno Fischer's Commentary is silent on these Prefaces, *the second of which utterly destroys his theory as to Kant's idealism.*

§ 2. Among the various branches of human knowledge, says Kant, there is one in regard to which our reason is condemned to a very strange lot, being troubled with questions which we cannot decline, seeing that they are forced upon us by our very nature, but which nevertheless we cannot answer, since they transcend all our faculties.

Our reason falls into these perplexities unawares. It commences from principles obtained and established by experience. From these it proceeds, according to its nature, to ascend higher, and to approach more remote conditions. But we soon discover that such a pursuit will never end, because fresh questions are ever starting up. Under these circumstances, nothing remains but to take refuge in first principles which transcend all experience, and which, nevertheless, excite so little suspicion that even the common sense of mankind does not quarrel with them. These however lead the reason into such obscurities and contradictions that we cannot but infer the presence of some hidden errors. Yet the discovery of these errors is impossible; because the principles adopted by the reason, as they transcend completely the limits of experience, will neither acknowledge nor submit to any test which originates within these limits. This arena of endless dispute is called METAPHYSIC (or Ontology). There was a time when her claims to be called Queen of the Sciences were admitted by all. It is now the fashion to despise her, and, like the mourning Hecuba, she sits forgotten and forlorn; in the words of Ovid: *Modo maxima rerum, tot generis natisque potens—nunc trahor exul inops!*

At first her rule, under the administration of the *Dogmatists*, was despotic. But this barbarous form of government degenerated through internal dissensions into complete anarchy; and the *Sceptics*, a sort of nomads who hate all settled conditions, periodically scattered the community. But they were too few in number to prevent mankind from continually attempting a reconstruction, though without any fixed or consistent principle. It seemed indeed once, in later times, as if the celebrated Locke's Physiology of the Human Understanding would put an end to the disputes, and settle for ever the lofty claims of Metaphysic. But no sooner had the descent of the pretended queen been traced to the low origin of common experience, and her assumptions accordingly questioned, than this *genealogy* was found out to be fictitious, and accordingly she persisted in her claims.* And so things returned to the antiquated and rotten dogmatism, and to the consequent contempt in which the science was held. Now that men think every path has been tried in vain, disgust prevails and total indifference, the mother of chaos and of night in the sciences, but the prelude of a better day.

For it is vain to assume an artificial indifference on subjects which *cannot be indifferent* to human nature; and the pretended *indifferentists*, though they may endeavour to disguise it by assuming a popular garb, are ever falling back into the metaphysical assertions which they profess to despise. Nevertheless, this indifferentism is a phenomenon deserving our deepest attention. It is the result of the ripe judgment of our age, which will no longer tolerate insecurity or false pretence. We hear[1] indeed complaints of shallowness, and of the decay of sound science. But well-founded sciences, such as mathematics and physics, refute this calumny, not merely by holding their ground, but even by making great onward strides. So would other branches of knowledge progress also, were their principles placed on a firm basis. 'In default of this indispensable requisite, doubt, indifference, and severe critick are rather evidences of a thoroughgoing spirit. Our age is the proper age of critick (criticism), to which everything must submit. *Religion* desires to escape by its *sanctity*, *Legislation* by its *majesty*.' They consequently excite just suspicion, when contrasted with those sciences which have freely and fairly met the test.

Reason is therefore challenged to begin afresh that most difficult task, the knowledge of itself, and establish its claims, not by oracular dicta, but according to fixed and unchangeable laws. The court which must decide this issue is the *Critick of the Pure Reason* itself.

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[1] Cf. the first note in this Preface.

This does not mean a critick of books and systems, but of the faculty of reason, as regards what knowledge it may attain, *apart from all experience.* It is in other words the deciding of the possibility or impossibility of metaphysic in general, and the determining of its sources, extent and bounds, exclusively from *à priori* principles.

This path, says Kant, I have pursued, and flatter myself I have discovered the source of all the errors which divided reason against itself. I have not evaded these questions by falling back upon the impotence of the human reason, but have determined them completely from principles, and after discovering the point at which reason fell into a misunderstanding with itself, have completely and satisfactorily solved them. I have aimed at completeness above all things, and I venture to say there is not a single metaphysical problem which is not either solved or provided with a key for its solution in this book. Pure reason being a unity complete in itself, any analysis which fails to solve a single question fairly suggested concerning it must be cast aside as perfectly idle.

The reader need not wonder at these pretensions as boastful and impertinent. They are infinitely more modest than the program of any ordinary system that pretends to prove the simple nature of the *soul*, or the first origin of the *world*. For these things far transcend the limits of all experience, whereas the present work merely analyses the reason and its pure thinking. It is in fact to be compared to common Logic, which analyses completely all the simple operations of thought, 'except that the question here proposed is, how much can we attain through these operations if deprived of all the materials and the assistance of experience.'

If, then, the *matter* of the book must be complete and explicit, it may also fairly be demanded that the *form* of its demonstrations should be *certain* and *clear*. Of course all mere *opinion* is worthless, when we seek to establish *a priori* knowledge. But it is for the reader to judge whether the grounds advanced by the author are certain, and equal to his pretensions. He has already asserted that he considers this quality absolutely indispensable. Some few points, however, which are not essential to the work might possibly excite suspicion, and may, therefore, be pointed out beforehand.[1]

There is no investigation more important, or that has given the author more trouble, than the so-called *Deduction of the Pure Categories*. This investigation has two sides. The first concerns the

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[1] As the reader can hardly understand them, before he has mastered the passages in question, he will be reminded of these explanations at the proper places.

objects of the pure understanding, and is intended to explain the objective validity of its *a priori* concepts concerning them. This is an essential part of Kant's plan, since it shows what the understanding and the reason can know, apart from all experience. It stands upon a basis perfectly independent of the second side of the deduction, which considers the understanding *subjectively*, and endeavours to analyse its faculties. 'As the question, How is the faculty of thought itself possible? can only be answered by inferring a cause from its effects, my solution,' says Kant, 'may seem (though this is not really the case) to be a mere hypothesis, and the reader may think himself at liberty to differ from me.' But this will not invalidate the former side of the argument.[1]

As to *clearness*, the reader has a right to expect logical clearness in the arguments, which has been carefully attended to, and also aesthetical and intuitive clearness, by means of sufficient examples and illustrations. The length and intricacy of the discussion have compelled the author to dispense with these to an extent he did not originally intend. A general survey of a system is often impeded by these illustrations, and '*many a book would have been far clearer if the author had not endeavoured to make it so clear.*'

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[1] The reader should bear in mind that this passage refers to the First Edition of the Critick.

Metaphysic is the only science, as we shall show, which is capable of absolute completion within a short time, by means of united efforts; for it is nothing but the systematic *inventory* of what we possess by *pure Reason.* Nothing can here escape us;[1] nor can any experience increase our knowledge. By means of the present Critick the ground has been cleared and prepared, and here the reader must perform the part of an impartial judge. When we proceed to build up the system of pure reason, under the title 'Metaphysic of Nature,' he should join us as a zealous co-operator, especially as the investigation of these details is easy, and more a recreation than a difficult task.

§ 3.* Such in substance, and to a great extent, in words, was the remarkable Preface with which Kant introduced his great treatise to the philosophic world. It bears a strong family likeness to the utterances of other intellectual reformers, and suggests the mental attitude of Bacon and of Descartes, of Locke and of Hume. There is the same boldness in asserting the discovery, and the same modesty in attributing it, not to genius, but to method. There are the same hopes of a speedy termination of error, the same conviction that even ordinary minds, when armed with proper weapons, can help in the victory.

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[1] This is one of the many passages which indicate that Kant laid little stress on what are called unconscious modifications of mind.

Kant's analogy to Bacon was indeed so striking, that he prefixed to his second edition a memorable motto from the Preface to the Instauratio Magna—'De nobis ipsis silemus. De re autem, quae agitur, petimus, ut homines eam non opinionem sed opus esse cogitent: ac pro certo habeant, non sectae nos alicuius, aut placiti, sed utilitatis et amplitudinis humanae fundamenta moliri. Deinde ut suis commodis aequi—in commune consulant, et ipsi in partem veniant. Praeterea ut bene sperent, neque instaurationem nostram ut quiddam infinitum et ultra mortale fingant et animo concipiant; quum revera sit infiniti erroris finis et terminus legitimus.'

In his first Preface, therefore, Kant explained the *historical* position of the Critick, and announced that he was about to revolutionise philosophy by a new method. And yet similar claims had often before been made, and had hitherto failed. What was the peculiar novelty of Kant's method which inspired him with such extraordinary confidence? How did he discover it? In the Preface to the Second Edition, published in 1787, six years after the first, these questions are fully answered; and, furthermore, the positive practical results of his apparently negative and speculative system are brought before the reader. This second Preface is therefore a material improvement to the work, and is of peculiar interest, as disclosing to us the line of thought that led Kant to his discoveries.[1]

§ 4. 'We can easily determine,' says Kant, 'whether we are pursuing any branch of knowledge *scientifically* by our success in attaining results.. If after much preparation, we are constantly coming to a standstill, and are obliged to recommence, and if our fellow-labourers cannot agree with us how our common object is to be pursued, our proceeding is no science, but a mere groping in the dark, which we shall do well to abandon, even with the sacrifice of many lofty aspirations.'

The history of any recognised science will prove this position. Consider *Logic*. Since Aristotle it has never lost one inch of ground. But what is far stranger, it has never gained anything either, and appears to be complete and settled. If modern writers have attempted to enlarge it by *psychological* chapters on the human faculties, or *metaphysical* on the nature of certainty, or *anthropological* on human prejudices, they have merely shown their ignorance of its nature. 'We do not enlarge, but disfigure sciences, by confusing their boundaries.' And the boundaries of Logic are strictly determined as the science which expounds the formal laws of all thought, and nothing but thought. The success of Logic is, however, owing to its narrow scope; for Logic is forbidden to consider any of the objects of knowledge, and must confine itself to the understanding and its form. It is accordingly but the outer court of those proper sciences which add to our real knowledge. With far more difficulty did reason enter upon the strict path of science, when objects also were concerned.

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[1] Thus, at the very outset, those philosophers are in error who affirm that this Second Edition is no improvement on the first.

If such sciences are to be rational, they must contain *a priori* knowledge,[1] and this knowledge of the reason may be related to the object in two ways—either as merely determining it (when given from elsewhere) or as *actually creating it.* This latter is the *practical* cognition of the reason, as when it produces from itself, for example, the idea of *duty.* The former is *theoretical* cognition. In either case the direst confusion must result, if the *pure* part, in which the reason determines its object altogether *a priori*, be not separately treated.[2]

Mathematics and *Physics* are the two theoretical branches of rational knowledge which aim at determining their objects *a priori*—the former quite purely, the latter partly so. Mathematics attained the safe position of a science long since among the Greeks. Yet this does not prove that its safe highway was constructed easily, as in Logic. Kant thinks that for centuries, especially among the Egyptians, it consisted in mere groping, and that the great change was owing to a *Revolution*, produced by a happy thought of some forgotten genius. He notices that even in later times the discoverers of special principles were remembered, though these principles were unimportant; and this he ascribes to the indelible effect produced by the first great Revolution.

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[1] So far as this means *power of prediction*, no one will dispute it.

[2] Kant in no way implies that these different parts of cognition are *given* separately, but says that if we confuse them in our *treatment*, we are like men spending money without keeping accounts, and then unable to ascertain what part of their outlay can be diminished, when economy becomes necessary.

In what did this Revolution consist? 'Whoever it was,' says Kant, 'that first demonstrated the equality of the [base] angles of an *isosceles* triangle found[1] new light dawning upon him; for he found *that he could not trace out and learn the properties of the figure from what he saw in it, or from mere thinking about it, but rather from what he had added to the figure in his own mind a priori, and had then represented by a construction. He also found that all the*

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[1] 'Who first demonstrated the right-angled triangle' is Mr. Lewes' translation, which makes no sense. He was probably misled by a clerical error (equilateral) noticed by Kant himself in one of his letters.

safe a priori knowledge he could obtain about it was merely the necessary consequence of what he had himself introduced into it, according to his own concepts.[1] This statement may well be regarded as the very corner-stone of all Kant's discoveries.

In natural philosophy progress was far slower, and it is only since the days of Bacon that it has attained the highway of science. But even from an empirical point of view there is a close analogy in its history to mathematics. When Galileo and Torricelli and Stahl began to make their well-known experiments, the same light dawned upon them also. They comprehended that reason discovers what it produces according to its own plans; that it must, so to speak, take the initiative, according to fixed principles supplied by itself, and compel Nature to reply, instead of waiting upon her for instruction, since chance observations are not connected by such necessary laws as the reason seeks and requires. Those phenomena alone, that agree with some fixed principle of the reason, can be regarded as laws of nature. 'Armed with such principles, then, in one hand, and with experiments framed according to them in the other, our reason must approach nature, to learn from her not in the capacity of a scholar, but in that of a judge, who compels his witnesses to give their evidence. And so even Physics owes its happy revolution to the idea of seeking from (*not inventing for*) nature that information, *of which reason could know nothing of itself*, according to what reason had itself introduced into nature.'[1] Up to this discovery physical philosophers were merely groping in the dark.

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[1] Mr. Lewes' translation of this passage (*Hist. of Phil.* ii., p. 467) appears, through some oversight, not to be even grammatical, and moreover obscures the point of the argument. Mr. Meiklejohn's translation would here have afforded him a fair version. His interpretation of the passage is equally erroneous; for he thinks Kant is insisting on the metaphysical method as opposed to the experimental, and is highly indignant at the proposal to study nature through our ideas. But Kant is really showing the vast superiority of the experimental method over that of mere observation. In the latter case the mind can only note down occurrences; in the former it approaches the facts *with a theory of its own construction*, and compels nature to say whether the facts conform to it or not. Surely this just difference is acknowledged by every scientific inquirer. The next paragraph should have made the point plain to a careful critic.

Metaphysic has not hitherto been so fortunate. It is a peculiar and isolated branch of knowledge, aiming at what lies beyond experience, and concerning itself with pure concepts, without representing them in figures, like mathematics. And here men have been constantly meeting with checks, and endeavouring to begin afresh, so that the science may be compared to the arena of a tournament, in which none can establish any lasting possession. This is evidently mere groping in the dark, and among pure concepts too, where verification is not easy.

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[1] I have marked the italics by way of answer to Mr. Lewes' criticism.

Why has the highroad of science not been discovered in this branch of our knowledge? Is it imaginary? Then why has our nature been visited with such unavoidable and restless longing? and can we trust it in other things, if it here proves a delusion and a snare? Or is it our fault, and have we hitherto failed to discover the right way, for want of the proper method?

Surely the examples of Mathematic and Physic, remodelled by a sudden revolution, are sufficiently remarkable to induce us to make a similar attempt in Metaphysic, for they are obviously analogous to it as rational cognitions. Hitherto it was assumed that our knowledge of objects must conform to them, and all attempts to extend it *a priori*, by means of pure thinking, have failed. Let us attempt the problem of Metaphysic, under the assumption that the objects must conform to our faculty of knowing them, an assumption which at first sight agrees better with the required possibility of knowing objects *a priori*—that is, of determining something concerning them before they are given to us.

This idea resembles that of Copernicus, who, when he found that the motions of the stars could not be explained by assuming them to revolve round the spectator, tried the effect of making the spectator revolve, and the stars remain at rest.' In Metaphysic a similar attempt can be made as regards the *intuition* of objects. And Kant made this attempt successfully some years before he discovered how to make it in the other parts of the science. If our intuition must conform to the nature of its objects, how can we know anything *a priori* about these objects? If the object must conform to the peculiar nature of our intuiting faculty, we may easily do so.

But we cannot stop at intuitions, and are compelled to consider them as representations of some object which we endeavour to determine through them. This object then must be *conceived.* I may either assume that the *concepts* by which I determine the object conform to it, and then arises the old difficulty of obtaining any *a priori* knowledge; or I may assume that the objects conform to these concepts. If I change the expression, and say that *experience* conforms to my concepts, the result is the same. For in and through experience alone do the objects become known to us. This assumption then seems to promise good results, for experience is a species of knowledge, and knowledge presupposes the understanding that knows. The understanding again presupposes certain rules, by which it acts, and these rules must be considered logically prior to the objects given through them. If we wish to express these rules, we can only do so by *a* *priori* concepts, to which, accordingly, the objects of experience must necessarily conform. Such is the result attained by Kant's Analytic, and these *a priori* rules, by which the Understanding proceeds, when it applies itself to experience, are the Kantian Categories. There are other objects of which the Reason alone forms Ideas, and indeed is bound to do so, but which cannot be given in experience, or at least given as they are thought by the Reason. In our attempts to think these objects we shall find an excellent test of our new way of regarding the problem, which is founded on the principle that we can only know that *a priori* of objects, which we have ourselves introduced into them.[1]

This method, Kant adds, in a note, is borrowed from physical science, and consists in seeking the elements of the pure reason in such a way *that our results can be confirmed or refuted by an experiment.* We cannot indeed make experiments with the *objects* of the pure reason (as in natural philosophy), for they are ever beyond the bounds of all experience. But we can do it with the *concepts* and *principles* which we assume *a priori*, by so arranging them that the same objects can be regarded from two different aspects—first, as objects of sense and understanding suited to our experience; secondly, as objects that are only thought, and suited to the isolated Reason, transcending all experience. If we find that, when things are regarded from this double point of view, our reason is at harmony with itself, but if from a single point, unavoidable contradictions arise, then the experiment has proved the justice of our distinction.[1]

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[1] Mr. Mill in citing this passage (*Exam. of Hamilton*, pp. 31–2) omits the important words *a priori*.

Our attempt succeeds perfectly, and promises Metaphysic the sure path of science in its first part, which is concerned about such pure concepts as can have corresponding objects given in experience. The possibility of *a priori* knowledge can now be perfectly explained, and the laws which lie *a priori* at the base of nature (in the sense above explained) can now for the first time be satisfactorily proved. But there results a conclusion very adverse to the second part of Metaphysic, which is that we can never advance beyond the bounds of experience; and yet this was the chief object of the science. 'Nevertheless, this very result tests the truth of our first estimate of rational knowledge, which was that it concerns phenomena, and abandons the thing *per se* as real indeed in itself, but unknown to us.' The Reason, indeed, necessarily requires the Unconditioned to complete the series of conditions we find in phenomena,

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[1] Kant's second Preface was written in answer to the criticisms and controversies excited by the First Edition, and therefore implies a general knowledge of the book, without which the following observations are necessarily obscure.

We cannot comprehend our mental phenomena without presupposing necessarily a substance called Mind, beyond and beneath all its various manifestations. This illustration will explain what Kant means by the necessary belief in the Unconditioned.

Supposing that as long as we assume our empirical knowledge to conform to objects as things *per se*, the Unconditioned *cannot possibly be conceived without contradictions*, but that assuming objects, as mere phenomena, to conform to our manner of representing them to ourselves, *the contradiction vanishes* (by confining the Unconditioned to things *per se*), then the latter assumption is established. We may however be able, on practical grounds, to re-establish *a priori* what has been shown to be unattainable by the speculative reason. In fact, the ground may have been only cleared for such a result. (This test, as Kant's note says, is similar to that employed in chemistry, where the elements which have been separated by analysis are again combined to reproduce the original substance. Our *Analysis* separates pure *a priori* knowledge into two heterogeneous elements, viz., things as phenomena, and things *per se*. Our *Dialectic* combines them again into harmony with the necessary Idea of the *Unconditioned*, and finds that this can only be done by adopting the distinction.) Kant expressly tells us he has adopted this hypothetical way of stating his conclusions, in order to show the train of thought by which he arrived at them. He insists that they have been perfectly established in his work, by the nature of Space and Time, and of the Categories. Copernicus' theories were at first mere hypotheses; they ended not only by being demonstrated, but by leading to the establishment of Newton's Law of Gravitation, which could never have been discovered had the former not been assumed.

In this attempt, then, made after the model of geometers and physical inquirers, consists the Critick of the pure reason. It is a treatise on the method, and not a completed system, of the science known as Metaphysic. But owing to the unity and completeness of reason within itself, the outline of the science is indicated by our method, and for the same reason metaphysic, like logic, is capable of completion once for all, when the faculties of the human mind have been surveyed in their nature and their use.

But what, it may be asked, is the value of this Critick? It appears to be at first sight only *negative*, prohibiting our speculative reason from transgressing the bounds of experience. This is indeed its first use. But this use becomes *positive*, when we consider that previous attempts have, as a necessary consequence, so extended the bounds of mere sense, as to interfere seriously with the proper practical use of the reason. For if such a *practical* use be necessary to morality, though it cannot be assisted by speculation, it must be secured against interference. You might as well say the police were of no positive use, because it is their negative duty to prevent peaceable citizens from being molested in the pursuit of their business. The analytical part of the Critick shows that we cannot possibly have any speculative knowledge beyond the bounds of experience.

But it must be carefully observed, that though we cannot *know* objects as things *per se*, we are able to *think* them. (In order to know a thing, I must be able to prove its possibility either from experience or the pure reason. But I can *think* what I like, provided I do not contradict myself. This thought is however only logically possible, and requires something additional to make it really possible; but this addition need not be sought in theoretical sources, but in practical also.) 'If we were unable to *think* things *per se* there would follow the absurdity of an appearance, without anything to appear.' Now let us suppose our distinction of things *per se* and phenomena had not been made. If so, the law of causality must bind all beings absolutely. It would follow that the Soul, from our single point of view, could not be regarded as free in its volitions, for they are subject to causality. But the Critick teaches us to regard it from two points, as a thing *per se*, and as a phenomenon.

From this latter point of view, its visible actions cannot indeed be free, but the result is different when we regard it from the former. Without, therefore, being able to *know* my soul as free, I liberate my attempt to *think* it such from an apparent contradiction.[1] Suppose, now, that the freedom of the will were one of the conditions, without which practical morality were impossible, but that the speculative reason had proved such an idea contradictory to itself, then freedom must give away, and with it morality, to make place for the necessity of natural causes. From such a result we are saved by the Critick.

The same great positive uses can be shown in our ideas of God and of immortality. These cannot even be *assumed* without checking the impertinences of the speculative reason, which, by applying its empirical principles where they are inapplicable, asserts all *practical extension* of the reason to be impossible. Such *knowledge* is the real source of immoral unbelief, and must be ordered to make way for *faith*. We aim then at improving the reason of our posterity by setting them to study a sober science, and saving them from wasting time and trouble on idle groping and pretentious dogmatism. Above all, we hope to dispose of all objections against morality and religion after the manner of Socrates, by proving clearly the ignorance of the objectors.

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[1] It must be carefully remembered that in this remarkable discussion (*Critick, Antinomy*, &c., sec. 9), Kant professed to prove, not the existence of freedom, nor its probability, nor even its possibility, but simply that it was not necessarily contradictory to causality. (See Critick, p. 345.) This guarded attitude has not been transferred to Mr. Lewes' exposition (*Hist. of Phil.* ii., p. 519).

And if there be any supposed loss in the surrender of the claims made by the reason, the loss affects the *monopoly of the schools*, not the *interests of humanity.* Were the doctrines of the immortality of the soul, and of the existence of God, ever really established by the subtile arguments and distinctions of the schools? Has it not been confessed, even by their authors, that the public are unable to grasp such refinements, and that the former was rather proved by the profound inadequacy of the present life to satisfy our aspirations, and the latter by the harmony, beauty, and kindness of nature? These proofs rather gain than lose, for the schools are taught to pretend to no deeper knowledge, and to confine themselves to the arguments that are accepted by the many, instead of arrogating to themselves the sole possession of such truth. But the schools remain in the possession of a science most useful to the public, though the fact is not recognised; a science which cannot and need not ever be popular, which refutes the arguments of the philosophers who mystify the public, by objections equally subtile, but saves them from drifting unconsciously into the assumptions and the quarrels that have hitherto disgraced metaphysic. 'Only by means of this science—the Critick of the Pure Reason—can *Materialism*, *Atheism*, *Fatalism*, *Enthusiasm*, and *Superstition* be disarmed. We also cut away the very roots of *idealism* and *scepticism*, but this rather affects the schools than the mass of mankind. It would be far more rational of governments to support such a science, than to countenance the ridiculous dogmatism of the schools, which raise an alarm about the public safety, when their cobwebs are torn in shreds, though the public neither notice nor miss them.' The reader will not fail to remember how very similar, even in expression, was the design of Bishop Berkeley.

Our Critick is not opposed to the *dogmatic procedure* of the reason in its pure cognition as a science, for every pure science must demonstrate dogmatically, that is to say, from sure principles strictly *a priori*. It is opposed to *dogmatism*, which is the dogmatic procedure of the reason *without previous criticism of its faculties*. But we do not therefore support shallow talking, which pretends to be popular, or scepticism, which abolishes all metaphysic. We rather establish this science on a sound and systematic, not on a popular, basis, and in its development must follow the steps of the great dogmatic philosopher, Wolf, who may be regarded the originator of thoroughgoing and systematic inquiry in Germany. Had his ground been critically prepared, he might indeed have established metaphysic as a science.

§ 5.* These reflections, which agree closely with the analytical and popular account Kant has given of his discoveries in the *Prolegomena* (published in 1783), conclude the exposition of his method and its results. There remains an explanation of the changes introduced into his second Edition, a subject of lesser importance, had not Schopenhauer made his pretended discovery that these two Editions differed very materially, not only in exposition, but in doctrine. It was said that Kant had become afraid of the idealistic conclusions drawn from his principles, and had suppressed the passages which resolve the whole external object into our own sensations, and their form (imposed by the mind also). More particularly, there was one paragraph inserted into the Deduction of the Categories which distinctly states that the matter of our intuitions is given by a source apart from, and independent of, the understanding;[1] and a refutation of idealism was introduced into the Principles of the pure understanding, in which Kant attempted to prove that the objective existence of things in space, is the condition of our internal experience. Above all, in the First Edition the distinction between soul and body was explained to be a difference, not of substance (of which we know nothing), but of representation; and from this point of view the community or relation of both was discussed. This was supposed to be contradicted or extenuated in the Second and following Editions, for the purpose, Kuno Fischer thinks, of gaining adherents. The question therefore assumes considerable importance; for it must determine, in the first place, the degree of Kant's own conviction as to the truth of his doctrine; and secondly, the real import of his system.

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[1] § 17, p. 89, of Mr. Meiklejohn's Translation, to which I refer throughout.

Let us then first of all consult the author himself, and consider what he says in his second and more elaborate Preface[1]:—'As regards this Second Edition, I naturally did not wish to let the opportunity escape of remedying, as far as possible, the difficulties and the obscurity from which may have arisen the sundry misapprehensions, that have occurred to many acute men (perhaps without my fault), in their estimate of this work. *In the positions themselves, and the grounds of proof, as well as in the form and completeness of the plan, I have found nothing to alter;* a fact which must be ascribed partly to the long consideration to which I submitted my work previous to its publication, partly to the nature of the subject itself, I mean the constitution of a purely speculative reason, which contains a veritable system of members, where everything is organic—that is, where the whole is for the sake of each individual part, and each individual part for the sake of the whole; so that any defect, however trifling, whether it be a positive error, or a mere deficiency, is certain to betray itself in use.[1] . . . But in the *exposition* much remains to be done, and in this respect I have attempted to improve this Second Edition, with the intention of clearing away, partly, the misapprehensions of the Aesthetic, especially of the concept of Time;[2] partly the *obscurity in the Deduction* of the Categories;[3] partly to supply the supposed want of sufficient evidence in the demonstrations of the Principles of the Pure Understanding;[4] partly, in fine, to remove misapprehension as to the Paralogisms laid to the charge of Rational Psychology[5] . . . But the necessary consequence of this improvement, except we made the work altogether too long, is a slight loss to the reader, since a good deal (that did not indeed belong substantially to the completeness of the whole) must be omitted, or put into a shorter form,[1] which, nevertheless, many readers might not wish to lose. This was done to make room for my present, and I venture to hope now intelligible exposition, which in substance, as regards the propositions, and even in their method of proof, CHANGES ABSOLUTELY NOTHING; but still varies [from the former] here and there in the method of the exposition in such a manner as could not be managed by interpolation. This slight loss, *which, by the way, can be supplied, if any one chooses, by* a *comparison with the First Edition*, is, I hope, more than counterbalanced by the greater clearness' [of the present Edition.][2]

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[1] The silence of Kuno Fischer as to these two Prefaces is very remarkable.

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[1] Cf. p. xxxix. of the Critick.

[2] Kant added Section i. § 6, on Time, and the General Remarks, ii.–iv. (p. 41–3). In his Introduction, Sections i. and ii. were greatly expanded, and v. and vi. added.

[3] From Section ii. § 11, of the Transcendental Logic to the end of the Deduction it was completely rewritten.

[4] Under each of the Definitions of the Principles (with the exception of the Postulates) the first paragraph, headed 'proof,' was added; as well as two Appendices, entitled 'General Remarks on the System of Principles,' and the Refutation of idealism, on which he also adds a note in the second Preface.

[5] From the words, 'but we shall, for brevity's sake' (p. 241), the whole discussion was rewritten.

In the face of this declaration, which explicitly asserts that nothing whatever has been altered in the system, and which invites the reader to compare the two Editions, we are told that the Second Edition is a mutilated, distorted, and depraved work, caused by the weakness of old age, and the fear of public opinion in Kant! It can be proved by the theological attitude of this, and of his later works, that these charges are perfectly absurd. It will be also shown in the course of this work that the supposed evidence of the theory is derived from a series of blunders and oversights (if not actual suppressions) in the interpretation of Kant's very clear, though not dogmatic declarations.

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[1] The third chapter of the Analytic (on Phenomena and Noümena), and the Refutation of Rational Psychology, were considerably shortened, part of the latter reappearing in the *Refutation of idealism.* The Deduction of the Categories is likewise abbreviated.

[2] Cf. p. xli. of the Critick.

As Schopenhauer's opinion is fashionable in Germany, I do not wish to open the discussion without giving the reader the means of judging for himself, by comparing the two Editions; he will find, accordingly, in the foot-notes and in the appendices to the third volume of this work all the passages of any importance which appear in the First Edition only. The results of my own comparison are simply these: that we may safely defy the advocates of the First Edition to find any doctrine there stated to which there is not a corresponding assertion in the Second; or to point out a supposed alteration in the Second Edition which we cannot prove to be supported by quotations from the original work.[1]

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[1] In Vol. III., Appendix C, are added short foot-notes showing the special points of agreement ignored by the critics, and explaining the supposed points of difference; and these will save us in this place from quotations, as well as from the discussion of them. The vacillating attitude of Mr. Mill and Mr. Lewes on this question has been noted in my Preface:

The assertion of the honest author is most decidedly true; in the propositions themselves, and even in their proof, *absolutely nothing* has been changed.

they seem unable to resist the force of my argument, but at the same time they will not accept thoroughly the conclusions which these arguments justify. The long note in the second Preface, which refers to the Refutation of idealism, and endeavours to improve the form of his proof, will best be discussed in connexion with the passage to which it refers. The reader may therefore pass it by for the present.

CHAPTER II.

THE INTRODUCTION.

PRELIMINARY CONSIDERATIONS.—*The Distinction in Kind between the Cognitive Faculties.*

IT is evident from the considerations urged in the Preface, that an exact notion of the human faculties lies at the basis of Kant's inquiry. He investigates the object through the subject and its conditions. What then are the faculties which teach us all we know of things? The general answer was given long ago, according to which they have been unanimously divided by philosophers into two classes: on the one hand, sense, sensation, external intuition or impressions from without; on the other, intellect, reflection, internal intuition, thought.[1] But while this distinction was generally admitted, there had ever been an *a priori* fallacy afloat (as Mr. Mill would say), that only one kind of knowledge could be true, and that all the information given us from other sources than this, must be either illusory or defective. Hence Kant, who discussed the subject in several shorter treatises prior to his Critick, notices, that under this assumption sensibility and understanding had been in turn exalted into the sole source of true knowledge. The idealists, from Plato to Leibnitz, had mistrusted the senses, and considered sensibility a mere vague and confused copy of the reality attained by thought. The sensualists, from Epicurus to Condillac, had considered the senses as the primary source from which the understanding compounded and abstracted a faint reproduction of the external reality. While, therefore, idealists and realists[1] are opposed diametrically as to the true cognitive faculty, they agree in one point, that sensibility and understanding differ *in degree* only.

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[1] It will be seen however that Kant distinguishes between internal intuition and thought, as indeed Locke had done before him.

If Kant had joined either party it would certainly have been that of the idealists. But he perceived that the clearest of all our knowledge, that of geometrical figures, was given by sense, and that many concepts of the understanding, such as the notion of right, could only be apprehended with great difficulty. He concluded that there were two cognitive faculties, totally distinct, and differing *in kind*, sensibility and understanding. This position is the basis of the whole critical philosophy. Kant himself has explicitly argued this point, and asserted this generic distinction, and any commentator who endeavours to refine it away, by speaking of these faculties as mere laws of development,[1] or by insisting that it is after all the same mind that knows in either case,[2] must be rejected as an uncertain guide. It is even questionable whether we should designate them both under the same name of faculty; for we shall see that sensibility is *a receptivity* in some respects passive, and understanding *an active spontaneity.*[3] We find, indeed, at a later stage of the Critick, a third faculty introduced, and called the Reason, as distinguished from the understanding. But if we attend to Kant's own explanation,[4] he tells us 'that the Reason does not give birth to any [new] concept, but only frees the concepts of the understanding from the limits of experience.'

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[1] It has been customary in English Philosophy to confine the term *Realist* to those among the schoolmen who asserted the separate existence of *general* ideas, as opposed to Nominalists. There is no reason for this restriction. The term is here used to mean the philosophers who assert the separate existence of our external percepts, as opposed to the idealists.

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[1] Prof. Webb, *Intellectualism of Locke*, p. 168, note.

[2] This question has been fully discussed by Dr. Ingleby and Professor Sylvester. See Sylvester's *Laws of Verse*, Appendix.

[3] I think one of the most valuable points in Mr. Lewes' critique is the remark that a *receptivity* need not necessarily be passive. Is this, however, in consequence of its own nature, or because the spontaneity of the understanding is so bound up with it as to be present in every excitation of the receptive faculty?

[4] *Critick*, (Ed. Meiklejohn), p. 256.

In fact, it differs from the understanding not in its essential nature, but in its *aim*, which is the unconditioned. This second distinction, then, though very important, is by no means so fundamental or so trenchant as that which has just been explained. In accordance with the latter, Kant divides his Critick of the reason into the *Transcendental Aesthetic*, or Critick of the Sensibility, and the *Transcendental Logic*, or Critick of the Understanding. The former had been sketched, completely enough, in his earlier treatises, and seems to have cost him far less labour to discover (as it also costs us far less to understand) than the latter.

We can now follow Kant's Introduction, observing closely the order of his exposition. He claimed particularly to have been the first who understood, and who therefore stated correctly, the *Problem of Metaphysic.* We are about to investigate the human faculties. We can only do this by analysing the effects which they produce, and these effects are knowledge or cognition.[1] The question, therefore, of the Critick is this: how is the fact of cognition possible? What causes, or what combination of them, are adequate to produce this effect? But does not this question presuppose that cognition is a fact? Must we not prove this also? And how can we prove it without ascertaining accurately what cognition is? Hence, there are three questions to be answered—(1) What is cognition? (2) Does it exist? (3) How is its existence to be explained, or how is it possible?[1]

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[1] These terms are in the following work used synonymously.

KANT'S INTRODUCTION.

§ 1. *Of the Distinction of Pure and Empirical Cognition.*—There can be no doubt that our knowledge begins chronologically with experience. For our senses are first affected by external objects, and our understanding is first occupied in comparing or arranging the materials so obtained. But though all knowledge begins *with* experience, it does not follow that it originates *from* experience. For it might, even when obtained from experience, be a composite thing, consisting partly of impressions, partly of additions made (in the act of receiving them) by our understanding. And it may be very difficult to separate these additions, and recognise them as such. The question, whether there be cognitions independent of all the impressions of the senses, is not therefore to be lightly decided. It may be objected, that elements added by the cognitive faculties cannot properly be called cognitions, for they do not teach us to know things different from the mind, but rather interfere with such knowledge. We may admit this objection so far as to allow that if our understanding fuses its own conditions with the impressions received from without, these things, as they are apart from us, cannot be known. But surely, in things as they appear to us, these elements must be of the last importance.

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[1] This is Kant's own procedure in the Preface to his *Prolegomena.* Cf. vol. iii. of this work.

The cognition of these elements is called *a priori*, as distinguished from that which is derived from experience, which is *a posteriori*. The popular meaning of *a priori* is simply that our knowledge is derived, as opposed to special experience, from a general rule, which may have been itself originally derived from experience. You say that a man who undermines the foundations of his house might have known *a priori* that it would fall. Yet he must have learned from experience that bodies are heavy, before he could make this inference. We intend, then, to use the phrase *a priori* cognition of such as is *absolutely* independent of *all* experience. *A priori* cognitions are *pure*, if they have no empirical elements mixed with them; if they have, they are *mixed*. So the assertion: every change has a cause, is a mixed cognition, because change is a notion that can only be obtained from experience.

§ 2. *We possess certain a priori cognitions, and even the ordinary understanding always contains them.*—By what mark, says Kant, can we surely know that we possess any pure, as opposed to empirical, knowledge? If we cannot think an assertion, without thinking it necessary, it is an *a priori* judgment; and it is absolutely *a priori*, if not derived from any judgment not itself necessary. Secondly, experience never gives us strict and absolute, but only comparative universality, gained by induction, and which asserts that so far we have found no exception. Empirical universality is then but an arbitrary or contingent exaggeration from the cases we and others know, to all cases, whereas strict universality is essential to the judgment in which it is found, and points to a peculiar source of knowledge, which we have designated *a priori*. Necessity and strict universality are certain marks of an *a priori* cognition, and are inseparable. But as empirical limitation is at times more easily shown than contingency, and it is often more convincing to show the unlimited universality of a judgment than its necessity, we may use these two criteria separately, each of them being in itself infallible.

* This view of the criteria of *a priori* knowledge has not met with general acceptance. Kant says indeed very justly, that exceptions in experience are more easily shown than abstract contingency in judgments, but many philosophers would demur to having necessity proved by universality. Sir W. Hamilton, indeed, distinctly deduces the latter from the former. But the school of Mr. Mill, while ad-

mitting the importance of universality, hold that it can prove only a *subjective* necessity, or conviction, stronger *in degree* than empirical conviction, but not differing from it *in kind.* An adequate discussion of this important question would interrupt our commentary, and we shall therefore transfer it to a succeeding chapter.

That there are strictly universal and necessary, and therefore *a priori* judgments in human knowledge, says Kant, is easily shown in science, by mathematical judgments, in ordinary life, by the assertion that every change must have a cause ; so plainly indeed does the latter concept contain these criteria, that it would be altogether lost were we to deduce it, as Hume did, from mere frequent association, and so allow it only a *subjective* necessity. But Kant thinks that without any examples, pure *a priori* principles can be shown indispensable to experience. For experience must deduce its certainty from some fixed principles, and not from rules, which are themselves all subsequent, and proved by experience, since these, he adds, could *hardly* count as first principles. Had Kant expanded this proof, it would have been an instance of what he calls his transcendental proof, which, from the existence of a fact in our cognition, proves the existence of the necessary conditions, from which alone the fact can result. He is 'content, however, in this place, to note the existence of a pure use of our cognitive faculties, and its attributes.' We must remember that they belong, not only to judgments, but sometimes to notions. So the space occupied by a body, or what we consider its substance, cannot be abstracted from it.

It is, I think, much to be regretted, that Kant did not give more weight to the force of custom, or subjective necessity, as he calls it, and show clearly that it may in all cases be distinguished from real or objective necessity. And this omission in the Critick is the more remarkable, as he had before him the writings of Hume, in which the effacing of this distinction was a capital feature.

§ 3. *Philosophy requires a (special) science, to determine the possibility, the principles, and the sphere of all a priori cognitions.*—We have seen in the Preface how certain cognitions attempt to transcend all experience, and to enlarge our knowledge independently of it. Nay this very knowledge is generally regarded as the most noble and important. Such are the problems that concern God, Freedom, and Immortality. But it might naturally have been expected that we should have determined accurately the origin, validity, and value of the principles we have applied in these researches. If we mean by *naturally*, what ought to be, this remark is just; but if we mean what usually happens, there are solid reasons for expecting this investigation to be long delayed. For the recognised security of mathematical knowledge leads us to expect the same from other *a priori* cognitions, though they are quite different in nature. And these we pursue with such ardour, that clear contradictions only will check us. Unfortunately the facts of experience, which in other sciences test idle theories strictly, have here no application. We ignore the fact that Mathematic, which has made brilliant advances in *a priori* knowledge, is strictly *confined* (as we shall see) *to intuition*. But the intuitions with which Mathematic deals are given *a priori*, and are therefore hardly distinguishable from pure concepts.[1] This example then excites us with the hope of great results. The fleet dove, that cuts the resisting air in her flight, might think to increase her speed if space were a vacuum. So Plato left the world of sense, and ventured on the wings (as it were) of Ideas, into the vacuum of the pure understanding. He failed to perceive that he could make no way, for want of a resisting medium, in which to apply his powers.

Speculation is ever hastening to complete her structure, and only then begins to consider the soundness of the foundation. Our suspicions are generally lulled during the construction by this fact, that perhaps the greater part of the work of our reason consists in the mere analysis, in *formal* explication of the concepts we already (though perhaps confusedly) possess. This sober and useful process seduces the reason to make unwittingly quite a different sort of assertion about given concepts, in which new *matter* is joined to them *a priori*, without questioning our right to do so. This distinction must be forthwith explained at greater length.

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[1] This remark shows why Kant vacillates in his language about space and time, calling them, in an earlier treatise, even *conceptus spatii et temporis*.

§ 4. *The Distinction between analytical and synthetical judgments.*—Though this distinction has become an household truth in philosophy, Kant's analysis has never been accurately expounded. The reader must pay particular attention to it, if he wishes to understand clearly the objective necessity of mathematical judgments.

If I assert, says Kant, of a body, that it is extended, I only assert an attribute necessarily contained in the notion. It is by an *analysis* of the notion that I form the judgment, and it is hence called analytical, or *explicative*, as enumerating clearly elements contained obscurely or confusedly in the concept. But if I assert of a body, that it has weight, I assert what cannot be discovered by any analysis of my notion of a body. This judgment is therefore synthetical or *ampliative*, enriching our notion by the addition of an new attribute.

* I said in a former work[1] that Locke had com-

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[1] Fischer's *Comm.* p. 28, *note*.

pletely anticipated this celebrated distinction. Mr. Lewes thinks[1] that a glance at the *Prolegomena* would have shown Mr. Webb and myself that Kant fully recognised Locke's priority. I do not know what a *glance* at the passage might have done, but a *careful perusal* of it had shown me that Kant (who was not '*fully* alive to Locke's priority') did not know the really decisive passage. It is not that cited by Mr. Lewes (p. 475) and Kant, but that cited by Mr. Webb, in the first chapter of the 4th book of the *Essay*, where Locke enumerates the *four kinds of agreement and disagreement between our ideas;* (1), Identity and diversity, viz., 'blue is not yellow;' (2), Relation, viz., 'the three angles of a triangle are equal to two right;' (3), Coexistence: 'gold is soluble in aqua regia;' (4), Real existence, viz., 'God is.' Here are Kant's analytical, his synthetical *a priori*, and synthetical *a posteriori* judgments accurately distinguished, and his very examples almost anticipated; and in the fourth the distinctness of *existential* judgments is asserted, which, as we shall see, Kant proved to be synthetical, but *subjectively* so, by the addition, not of an attribute, but of a relation to ourselves, and therefore he also distinguished them from other synthetical judgments.

* I agree with Kant that mere hints are not anticipations, and do not, therefore, claim any exag-

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[1] *Op. cit.* ii. p. 475, *note.*

gerated importance for a curious passage in Descartes' 14*th Regle pour la direction de l'esprit*, though in it he lays down the Kantian distinction of analytical and synthetical as plainly as it can well be expressed, and shows how previous philosophers had confused these judgments, and consequently fallen into errors. Here is the passage—

'Passons maintenant à ces paroles : *un corps a de l'étendue ;* bien que nous comprenions que dans cette phrase *étendue* signifie autre chose que *corps*, cependant nous ne formons pas dans notre imagination deux idées distinctes, l'une d'un corps et l'autre de l'étendue, mais une seule, celle d'un corps qui a de l'étendue. Au fond c'est comme si je disais : *un corps a de l'étendue*, ou plutôt *ce qui a de l'étendue a de l'étendue ;* cela est particulier à tout être qui n'existe que dans un autre et qui ne peut être compris sans un sujet ; il en est autrement pour les êtres qui se distinguent réellemen[illegible] des sujets. Si je dis, par exemple, *Pierre a des richesses*, l'idée de *Pierre* est entièrement différente de celle de *richesses ;* de même si je dis : *Paul est riche*, je m'imagine toute autre chose que si je disais, le *riche est riche.* Faute d'apercevoir cette différence, la plupart pensent à tort que l'étendue contient quelque chose de distinct de ce qui a de l'étendue, comme les richesses de Paul sont autre chose que Paul.' But to return.

All analytical judgments depend upon the Laws of Identity and Contradiction.[1] You cannot deny to a concept any of its parts, without at once contradicting your own act of conception. All analytical judgments are also *a priori*, however empirical the concept concerned may be, for they require no additional experience, but a mere dissection of given notions. But here *a priori* is used in the popular sense explained above. Synthetical judgments must of course *conform* to the logical law of Contradiction also, but still they can never be obtained from it alone, and require some distinct principle in addition. What can this principle be?

All empirical judgments are synthetical. For it were idle to apply to experience for any information that could be obtained by analysis of our concepts. But if these judgments join new elements to our previous concepts, what guarantee have we that these elements ought to be so joined? We must *know* that the predicate belongs to the subject, and that it belongs to it *necessarily*, or we have no cognition. Kant has replied to this difficulty very fully, especially in his First Edition. Let us first take the case of *a posteriori* empirical judgments, such as, 'all bodies have weight.' How do we know this? From experience. If so, *our real subject is not the concept of body, but our whole potential experience of bodies.*

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[1] Cf. Kant's *Prolegomena*, p. 17.

The concept is only (like all concepts) a partial and incomplete representation of our experience, and we may add from this experience new elements to the incomplete representation. Our full experience is then the x, as Kant calls it, to which the mind refers, and by reference to which it produces the *a posteriori* synthetical judgment. It is, then, from this different point of view, in some sense an analytical judgment, and the partial concept which is the ostensible subject, is not the real subject.[1] But the real subject—experience—consists of a synthetical combination of intuitions, so that the analysis is only possible through a previous synthesis.

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[1] This exposition shows that Mr. Lewes is in error, when he imagines (*op. cit.* ii., p. 472) that he has overthrown Kant's famous distinction by showing that the same propositions constantly pass from one class to the other. Kant never denied this transition. But he did uphold what Mr. Lewes in fifty other places strongly insists on, that the process of dissecting our acquired concepts, and that of enriching them by recurring to nature, and seeing what additional predicates may be attached to them—that these processes are totally distinct. How Mr. Lewes can call this a *logical* distinction, and nothing else, passes my comprehension. It is surely a matter of fact, a psychological observation which any one can make for himself. It appears from the argument in the text, that when the analysis is of our ready-made concepts, the judgment is analytical; but when it is of our general experience, or, as we shall see, of our intuition, it is synthetical, since it adds to our concept, though it may often consist merely in explicating our confused experience or vague intuition.

A more difficult problem remains. All empirical judgments are not *a posteriori*, for many of them are universal and necessary. If they be synthetical, and also *a priori*, what is the x, the real subject, which affords us the real synthesis? When we assert of a change, that it must have some cause, this never could be obtained from the analysis of the concept of change; where then did we find the combination *a priori* of change and cause? for as this judgment is absolutely universal and necessary, we could not as before have recourse to our complete experience, of which it is indeed one of the very conditions. The answer to this question was one of Kant's greatest discoveries. But he made it first in the field of Mathematic.

§ 5. *All Theoretical Sciences contain Synthetical and a priori Principles.*

1. While Philosophy[1] is satisfied with *discursive* judgments about concepts, MATHEMATIC insists on proving each step by *intuition*, and this observation gives us the clue to its first condition. This condition must be intuition, and it must be *a priori*. For though mathematical, like all other true judgments, must conform to the Law of Contradiction, such mere analysis does not explain their real nature. Consider the judgment $7 + 5 = 12$. All

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[1] Cf. *Proleg.* p. 36.

previous philosophers considered this a mere analytical inference. But Kant denies that the concepts of 7, of 5, and of their addition, actually contain 12 as a necessary element. 'We must go beyond these concepts, and obtain the assistance of the intuition corresponding to either of them—suppose the fingers of a hand, or five points in a space—and add the units of the five given by intuition successively to the concept of 7.'[1] When this operation is completed, and then only, do we see the result to be 12. All such arithmetical judgments are therefore synthetical, as may be easily proved by considering the addition of large numbers. We there find that no analysis of our concepts will give us the required result. Geometrical judgments are equally synthetical. If I say that a right line is the shortest possible between two points, I cannot elicit anything about its shortness, which is *quantity*, from the mere concept of its straightness, which is *quality*.[2]

(There are indeed, Kant parenthetically observes, in geometry and also in arithmetic analytical judgments depending on the Law of Contradiction, such as $a = a$ and $a + b > a$, but neither are these the principles on which the demonstration is based, nor would they be admissible in mathematics, were they not capable of being expressed in intuition. What misleads us about synthetical judgments, and makes us regard them as analytical, is an ambiguity of expression. *We ought* to attach the predicate necessarily to the concept of the subject. So we ought, but the question is, whether *we do* so, until we have supplemented the concept by our intuition.)

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[1] The reader will observe that Kant proposes to add the *intuition* of 5 to the *concept* of 7, the very expression repeated verbatim in the *Prolegomena*. He appears to mean that the 7 is a made up group, whereas the 5 units are added seriatim.

[2] In the *Prolegomena*, Kant adds a still clearer example. All the proofs of equal triangles resolve themselves ultimately into *super-position*, which is no logical analysis, but a direct appeal to intuition.

2. PHYSICAL science contains *a priori* synthetical judgments among its principles. The examples which Kant gives are not the principle of causality, as Kuno Fischer alleges, but the assertions that *the quantity of matter in nature is constant*, and that *action and reaction are always equal.* Permanence is not an original part of our concept of matter. Reaction is not so either.

3. METAPHYSIC, whether we grant its scientific value or not, at all events pretends to occupy itself not about analysing concepts, but about extending our knowledge, and it employs such *a priori* synthetical principles, as our experience cannot even grasp. We can take as an example, *the world must have had a beginning.* Metaphysic then *aims*, at all events, at consisting of nothing but synthet-

ical *a priori* judgments. When Kuno Fischer gives as an example *judgments asserting existence*, he forgets that the synthetical nature of such judgments is only established in the latter part of the Critick by a long and difficult discussion, and could therefore not be here quoted as a commonly received truth.

§ 6. *The general Problem of the Pure Reason.*—It is very useful to comprehend a number of investigations under a single formula. Both the proof and the refutation are thereby simplified. A single question expresses the problem of the pure reason, *how are synthetical a priori judgments possible?* By its establishment or refutation Metaphysic must stand or fall. David Hume, of all previous philosophers, approached nearest to this problem, but did not state it to himself either distinctly or universally enough. He confined his attention to the Principle of Causality, and exploded Metaphysic as in reality borrowed from experience, though decked out with an apparent necessity engendered by habit. A larger consideration of the question would have shown him that his conclusion disproved the possibility of mathematics, a result at which his good sense must have revolted. Kant tells us, in his *Prolegomena*, that this scepticism of Hume was the exciting cause that prompted his first critical doubt.

The solution of the above problem explains the possibility of all sciences which contain a theoretical cognition of objects *a priori*, and therefore answers the questions: *How is pure mathematic* and *how is pure physic possible? That* they are possible, their actual existence proves. As to *Metaphysic*, its want of success excites reasonable doubts as to its possibility. Yet as a fact in human nature, a certain spontaneous Metaphysic cannot be denied. The reason is irresistibly impelled to discuss those questions which transcend the bounds of experience, and in this sense there has been since the dawn of speculation, and there will ever be, Metaphysic. The question therefore remains: How can this impulse be explained from the nature of the reason, or *how is spontaneous metaphysic possible?*

But as it has confessedly led to perpetual contradictions, we must insist upon the farther and last issue: *how is Metaphysic as a science possible?* These are the strictly scientific, and closely defined limits of the Critick, which is concerned, not with objects, but with reason and its conditions. All previous dogmatic attempts at Metaphysic may be completely ignored, as either affording a mere analysis of concepts, which though useful is not Metaphysic, or as consisting of assumptions which have long since become suspicious, owing to the contradictions which they originated.

§ 7. *The general Conception and Subdivisions of a special Science, called Critick of the Pure Reason.*—The reason is the faculty which gives us the principles of *a priori* knowledge. An *organon* of the pure reason would then be a summary of these principles, and its detailed application would be the *system* of the pure reason. The present work is a mere preliminary (or *propædeutic*[1]) to this system, of negative use; and devoted to clearing and purifying our reason from errors on the subject, by means of searching *criticism.*

'I call all knowledge *transcendental* which is not directly concerned with objects, but with the way in which we cognise them, so far as it is possible to do so *a priori.* A *system* of such knowledge is properly called *transcendental philosophy.* Yet even this exceeds our design, as it should contain a complete account of our analytical, as well as our synthetical knowledge; whereas we shall only carry our analysis as far as is absolutely necessary to the understanding of our synthetical principles. This work is then merely a transcendental Critick, or *Critick of the Pure Reason.* The main point in subdividing such a science, is to admit no concepts that have the smallest empirical element.' Thus the principles of morality, though they are by no means based on pleasure and pain, or on desires and inclinations, all of which are empirical in origin, yet imply them necessarily either as obstacles to duty, or incitements to action. They must therefore be excluded.

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[1] προπαιδευτική.

Our science must of course contain first *Stoicheiology*,[1] and next *Methodology*. Each of these will be subdivided according to principles explained in the sequel. One point must here be mentioned: that there are two stems or trunks of human knowledge which perhaps spring from a common, but to us unknown, root, and these are *sensibility* and *understanding;* through the former of which objects are *given* to us, through the latter they are *thought*. So far as the sensibility may contain *a priori* representations that are the conditions of objects being given to us, so far does it enter into transcendental philosophy. And as objects must be given to us, before they can be thought, this transcendental doctrine of sensibility, or Aesthetic, must be our first consideration.

* CONCLUDING REFLECTIONS ON THE INTRODUCTION.

§ 8. *The History of Kant's Discoveries, and his peculiar Method of Proof.*—Kuno Fischer has given, in his *Commentary on the Critick*,[2] a very interesting sketch of the chronological development in Kant's earlier writings. This sketch is particularly valuable, because it shows that the critical philosophy was not adopted by Kant till he had actually supported some of the most popular solutions adopted in the present day. They were tried by him, and found wanting. As early as the year 1762, Kant declared that all logical judgments were analytical and *a priori.* The following year he contrasted with them the connexion of cause and effect, which he declared to be synthetical. He had then discovered that real cognitive judgments, as opposed to logical, were synthetical. But a few years afterwards he declared with Hume, that the concept of cause was obtained empirically. He did not yet perceive how synthetical judgments could be *a priori.* This is in fact the attitude of Mr. Mill, and his school, who explain the apparent necessity of judgments by association. It cannot be said therefore of Kant, as has been said of Sir William Hamilton and of Dean Mansel, that he 'ignored' inseparable association, and did not give that theory his serious consideration.

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[1] Or Doctrine of Elements, στοιχεῖα.

[2] pp. 28–33. Cf. also Kant's *Proleg.* (Introduction).

But a deeper reflection on mathematical judgments altered his views. Surely these cannot be empirical, and yet they most certainly give us real knowledge. As early as 1764, Kant saw that they depended upon intuition, and he declared space to be that primitive intuition. But still he ascribed to it 'a reality proper to itself,' which lay at the basis of all matter. This was the view of Hamilton and his school. But if space were thus given from without, how could its judgments be anything but empirical, and hence how could they be universal and necessary? If they are such, space must be an intuition not given with objects from without, but *a priori*. This step he made between 1768 and 1770.

By maintaining then the *a priori* and yet synthetical character of mathematical judgments Kant parted company with Hume, and entered upon his critical path. It was obvious when the existence of such judgments was ascertained in one science, that the same problem must be solved in other sciences. How about Metaphysic? If it means the science of things in themselves, all judgments whatever about such things are rendered impossible by our late discovery. For if space and time are necessarily imposed by the mind upon all the objects it can know, how can things apart from these conditions ever be brought before the mind? How can we speak of things as they are in themselves, when we only know them under these all-important modifications?

There is only one other sense in which a Metaphysic of *things* is possible—in the sense of *phenomena*. Is there any universal and necessary knowledge of phenomena possible? Is there such a thing as *a priori* Physic? This was the last and by far the most subtile of all Kant's discoveries. He would not publish his *Critick*, or consider his system complete, till he had ascertained that as we *intuite* phenomena, under *a priori* conditions, so we also *think* and connect them under *a priori* conditions. As the *a priori* conditions of intuition give us synthetical *a priori* judgments in Mathematic, so the *a priori* conditions of thought give us similar judgments in Physic. But we only mean thought about phenomena—thought applied to experience. *The cognition of the things of sense need not itself be sensuous cognition.* Ten years of thought brought him to this conclusion. The critical philosophy therefore, like most great discoveries, was not the offspring of a happy guess, or a sudden inspiration, but the slow and gradual result of a long life of labour.

We are left in no darkness as to all these points. Not only the chronological sequence of Kant's works, but the general account of his discoveries given in Kant's second Preface, and in his *Prolegomena,* are explicit. In this latter work, published for the use of teachers in expounding the Critical Philosophy, he gives the analytical or regressive view of the system synthetically constructed in the Critick. I have endeavoured to combine both in the preceding Commentary. One point, however, deserves special attention, before we enter upon our task. The nature of Kant's demonstration throughout the Critick may appear at first sight illogical, inasmuch as he argues from the position of the consequent to the position of the antecedent, and this he calls his *transcendental proof.*[1] But this argument is only illogical on account of the plurality of causes. Given a cause, its effect will follow; but given the effect, we cannot infer the particular cause, except we are certain that no other cause could have produced the effect. We may safely argue from the effect to its *only possible cause.* And such is Kant's investigation, which infers from the fact of cognition the only possible conditions under which it could exist. When these conditions are established, they show not the *existence* of the fact, by which they were themselves proved, but its legitimacy. Thus the legitimacy of mathematic and physic, and the illegitimacy of Metaphysic, as a science of things *per se*, are demonstrated from the conditions they involve. It may be objected that if Metaphysic be a fact, its conditions must be as real as those of any other science: how then can it be rejected? In answer it may be observed firstly, that the conditions of Metaphysic are absolutely inconsistent with those of mathematic. This raises a strong presumption against the more doubtful science. Secondly, if it be found that from the conditions of Mathematic and Physic the possibility of an illusory science of Metaphysic can be explained, whereas from those of Metaphysic the very existence of Mathematic and Physic can be shown impossible—in such a sense, we cannot hesitate as to our decision. The Aesthetic shows the legitimacy of Mathematic, the Analytic that of Physic; the Dialectic proves the illegitimacy, as well as the apparent existence of Metaphysic. These are the main divisions of the Critick.

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[1] Cf. Kuno Fischer, pp. 24-8.

CHAPTER III.

THE TRANSCENDENTAL AESTHETIC.

§ 1. *Definitions.*—The immediate knowledge we have of objects is *intuition.* This only occurs if an object is given us, that is to say, if it produces an affection or modification of our minds. The faculty of obtaining representations through this affection produced by objects, is *sensibility.* Kant notices that this so-called faculty is properly a *receptivity,*[1] as opposed to the spontaneity of thought. Sensibility alone gives us intuitions: when these are thought of the understanding, we obtain *concepts.* All mental activity must refer, either mediately or immediately, to sensibility. In no other way can an object be given us. The effect of an object on our sensibility, so far as we are affected by it, is *sensation.* So far as an intuition is of this sort, it is *empirical.* 'The undetermined object of an empirical intuition is called an appearance, or phenomenon.' The element in it that corresponds to sensation is the *matter;* the element that renders its variety reducible to fixed relations is the *form* of the phenomenon. The form differs completely from the matter in this, that while the matter is given *a posteriori*, the form exists *a priori*, as it were, ready in the mind, and can therefore be considered quite separately.[1] Representations are therefore *pure*, in which no sensation is to be found, and the pure form of intuition, that reduces their variety to order, is in the mind, and may be called *pure intuition*. Abstract from a body what the understanding thinks about it, such as substance, action, and divisibility; abstract also what belongs to sensation, such as incompressibility, hardness, colour, &c., and there still remain of our empirical intuition extension and figure. These belong to the pure *a priori* intuition which exists in the mind, even without a real object of sense, as a mere form of sensibility. The science of these *a priori* forms of sensibility may be called *transcendental aesthetic*, using this word not in the sense of the philosophy of taste, but in the Greek sense of *αἴσθησις*, as opposed to *νόησις*. Our investigation shows that there are two such forms, space and time, which we proceed to consider.

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[1] Many of Kant's critics in Germany, especially Edmund Montgomery, consider that receptivity implies *passivity.* I am not aware that Kant anywhere in his *Critick* speaks of intuition as passive.

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[1] Kant says expressly (note to § 26 of the *Deduction*) that there are elements not given by sensibility included in his Aesthetic, so difficult is it to separate in treatment what is one in nature. But many of his critics have assumed, in direct opposition to this statement, that Kant made a sharp separation between the two faculties in their actual use, and have proceeded to charge him with want of psychological insight.

§§ 2 and 4. *Metaphysical Exposition of Space and Time.*—Although Kant considers the two forms separately, we may combine them, so far as the same observations apply strictly to both. This is the case with the *metaphysical exposition*, defined by Kant, as 'containing the description of a notion, as given *a priori*.'

By means of our external sense, which is a property of our minds, we represent objects as without us, and their form and relations are determined in what we call Space. The internal sense, by means of which the mind intuites its own internal states, gives us indeed no intuition of the soul itself, as an object, but has nevertheless a form, viz. Time, without which no internal expression is possible. What then are Space and Time? Are they real existences? This is the popular belief. Or are they mere relations, that belong however to things in themselves, whether we intuite them or not? This was the view of many previous philosophers. Or do they belong merely to the subjective nature of our mind, as forms of its intuition, through which alone they can be added to things?

*Kant does not consider the possibility of their falling under more than one of these three heads. For in the first place, if any one of these suppositions satisfies all the phenomena, the philosophical law of

Parcimony forbids us to assume an additional one *without any reason at all.* Secondly, if the subjective origin of space and time be established, it is specially absurd to assume that the peculiar element added to objects by the mind, which constitutes in fact the essential difference between the phenomenon and the thing *per se*—that this element is added by the mind to objects which have it already in themselves. Recent controversies will make it necessary to revert to this subject, when we have considered Kant's express utterances on the point.

(1.) Space and time are not empirical concepts, deduced from our experience. For we cannot refer our sensations to anything without us (that is, in space), nor can we assert them to be simultaneous or successive, except the representations of space and time were already in the mind.

(2.) Space and time are necessary *a priori* representations, lying at the basis of external and internal intuitions respectively. It is impossible to conceive either of them annihilated, though we can easily conceive all objects in them removed. They are therefore the necessary conditions of this very possibility of phenomena.

(3.) Space and time are not general concepts of the relations of things, but pure intuitions. For there is but *one* space and *one* time, of which all separate spaces and times are parts. And these parts are not considered as constituent elements, composing space and time, and therefore prior to them, but rather as limitations of space and time, and existing in them. Hence an *a priori* intuition lies at the base of all our notions of space and time. Among the many errors in Cousin's exposition of the Critick, none is more remarkable than his misconception of this cardinal point.

(4.) Space and time are represented as unlimited quantities.[1] For the infinite parts which they contain are neither constituent elements chemically fused to produce them, nor logical parts contained under them. Every concept indeed is represented as comprising a possibly infinite number of individuals *under* itself, but it cannot be conceived as containing them *within* itself. The parts of space and time are *in* infinite space and time, not contained *under* our concepts of them. Our original representation of space and time is therefore not concept, but *intuition.* Kant had added, in his first Edition, that no general concept of relations (in space) could of itself imply the endlessness of these relations, as our notion of space certainly does.

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[1] Kant says of space that it is represented as an *infinite given quantity*, a statement justly attacked by his German critics (especially Montgomery), who deny that on his own principles infinity can be given to sense, or indeed given at all. I suppose he meant to say *indefinite*, for he is far more cautious in the parallel remark on time, where he says the 'infinity of time means but this, that all definite quantities of time *are only possible by limiting* the single (total) time lying at their basis.' Hence time is originally given as *unlimited*. A vagueness in absence of limits may be given, though proper infinity cannot. I think Kant's opponents should have given him the benefit of this reasonable explanation. Even as to space, he spoke of its infinity, in the first Edition, as the absence of limits in the extension of intuition (*die Grenzenlosigkeit im Fortgange der Anschauung*).

§§ 3 and 5. *Transcendental Exposition of Space and Time.*—Kant defines this to be 'the explanation of a concept as a principle from which the possibility of other synthetical *a priori* cognitions can be understood.' It is necessary to show (*a*) that such cognitions really flow from the given concept; (*b*) that these cognitions are only possible by presupposing this particular explanation of the concept.

Geometry is a science that determines the properties of space synthetically, and yet *a priori.* What then must our representation of space be, to produce such cognitions? It must obviously be intuitive, for otherwise we could not obtain from it synthetical propositions pure, and also *a priori,* for these judgments are demonstrable, and carry with them necessity, such as the statement, that space has but three dimensions. So also there are axioms concerning the relation of time equally demonstrable and necessary: *e. g.* Time has but one dimension, different times cannot be simultaneous (as different spaces are), but successive. So also the concept of Change, and with it of Motion (change of place), are only possible through our notion of time; and through this latter only as an *a priori* intuition, for no concept could possibly make us understand the possibility of change, which is, in fact, the combination of contradictory predicates—the existence and non-existence of the same thing in the same place. It is only in time, that is to say successively, that this is possible. All the synthetical propositions, therefore, derived from our idea of motion in general (and they are not a few) are wholly dependent on our idea of time.

* The expositors of Kant[1] have uniformly derived the science of Arithmetic from the intuition of Time, a derivation so important, if true, that he could not possibly have omitted to mention it. But although in his *Prolegomena*, he has (perhaps in deference to his critics, and seduced by his passion for symmetry) conceded *en passant*, that this view is possible, he has left us in no doubt, from several passages in his *Critick*, that the units of the science of arithmetic, being essentially simultaneous, and not successive units, are given us primarily in space, and not in time. The original intuition of 5, for example, is not a group of five successive thoughts or intuitions, but the immediate perception, through sight, and perhaps through touch also, of five si-

multaneous, adjacent, units. The fact that we can, if we choose, apprehend them successively in five separate acts of attention, makes us apply arithmetical laws to sensations in time also, but I do not see how a summation, or subsumption of several units under a higher number, regarded as a unit itself—how this would ever have been accomplished, were we not aware intuitively of the simultaneous presence of the units within a small definite portion of space. There is no other practical way of teaching arithmetic to a child or savage, than by appealing to space intuitions. Let me add that the subdivision of units into fractions is equally unattainable, originally, through intuition of time, but is easily obtained through space, where all the units assumed are intuitively divisible. I have pointed out in another work[1] how the opinion appears to have arisen. Our only way of exemplifying quantity in time is by the act of adding (mentally) units to one another, in other words by number. But this *schema* of quantity, which will be discussed in its proper place, *is expressly contrasted by Kant*[1] *with any representation which can be reduced to an image.* The derivation of arithmetic from the intuition of space has never yet, so far as I know, been refuted, and though not definitely stated hitherto, was distinctly implied as far back as Descartes.[2]

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[1] *E. g.* K. Fischer, Dean Mansel, Sir Wm. Hamilton, and many others. Since the publication of my criticism on Kuno Fischer's *Commentary*, I think this position has been tacitly abandoned.

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[1] Cf. *Fischer's Commentary on Kant's Critick*, p. 95, *note*. Dr. Tarleton has suggested to me that I was wrong in implying that space was the *only possible* source of arithmetical intuitions. As he observed, we can conceive a mind ignorant of space distinguishing units and their addition by the striking of a clock. And if any given number of strokes were gathered, he thinks, by means of some longer division of time under a larger unity, an acute reasoner might even under such conditions construct an arithmetic. There is no doubt, however, that the actual origin of our arithmetic is space, and I have above stated what I consider a great difficulty, the existence of comprehensive unities and of fractions which could hardly be reached through time alone.

§ 6. *Deductions from the preceding Notions.*—(*a.* and *b.*) Neither time nor space represents any properties of things in themselves, nor do they express any relations of such things to one another which still exist, if we abstract from things the subjective conditions of intuition. For in no case can determinations, absolute or relative, be intuited *a priori*, prior to the existence of the things which they determine. To assert then the absolute reality of space and time is to assert that we know *a priori* the properties or relations of things which we do not know. Such an assertion has no meaning whatever, unless we assume that space and time belong to the subjective conditions imposed on the mind, and are therefore logically prior to the cognition of objects. Upon this supposition the necessary and universal judgments obtained from the intuitions of space and time follow as a matter of course. Also our external image of time is an endless right line, which expresses all its relations in an intuition, and therefore proves it to be such.

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[1] *Critick*, p. 110.

[2] See his *Règles pour la Direction de l'Esprit*, xiv. and xv.

(*c*). It is then only from the human point of view that we can speak of extended beings, or of events in time. If we abandon the subjective conditions, under which alone we can be affected by objects, then both space and time have absolutely no meaning. These forms are a necessary part of every intuition which *we* can have, because we intuite through them. But we may not impose the conditions which limit our cognition of things on things themselves. Space and time then include all things which *appear to us*, but beyond this we can give neither of them any reality. For as they are not things, but our particular way of looking at things, it is absurd to imagine that they can belong to things *per se* as qualities. Again, as we cannot possibly investigate the conditions which limit the intuition of other beings than ourselves, we cannot say whether any of them are obliged to look at things as we are. We are therefore incompetent to affirm the existence of space and time, even in this sense, which is the only possible sense in which they can be conceived beyond our own experience without absurdity. But when thus limited, nothing can be more objectively certain. There is no possible intuition which we can have apart from space and time. We hold therefore, as strongly as possible, their *empirical reality*, but assert their *transcendental ideality*, that is that they are nothing, if we omit the conditions of experience, and regard them as belonging to things in themselves. We also deny their *absolute reality*, which can never be revealed to us, and which is in some senses absurd.[1]

Space is the only one of our subjective representations relating to what is without us which can be called objective *a priori*. For synthetical *a priori* propositions cannot be deduced from any other of them, so that such sensations as heat, colour, and sound can claim no ideality at all, accurately speaking.[2] They agree indeed with space in belonging to the subjective nature of sensibility, but being sensations and not intuitions, they in themselves give no object, not to say an object *a priori.*

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[1] When Trendelenburg says that Kant forgot to inquire whether space and time might not be *both* subjective and objective, as a third possibility, he shows by his very statement of the question his ignorance of Kant's system. To say, as Trendelenburg does (*Beiträge*, pp. 215 sq.), that Kant made them purely subjective is equally false. Kant would never have conceded such a statement of his views. He denied the subjectivity in the usual sense of space and time. He asserted them expressly, in the sense which Trendelenburg desires, to be both subjective and objective. He never denied their objectivity except in an absurd sense.

[2] He means that we cannot conceive a mere sensation as having even an ideal existence separate from our thinking. To afford us this possibility, we must conceive objects as distinct from mere affections of the senses.

Time is the formal condition of all phenomena generally. Space is confined to those which are external.[1] But all representations, whatever be their object, must belong, as affections of the mind, to our inner states, and as these inner states are subject to the formal condition of time immediately, even external phenomena are mediately subject to the same condition. There is therefore no part of our experience free from the condition of time.

Kant cautions the reader repeatedly not to attempt to illustrate his transcendental doctrine of space and time, by comparing them to the subjective affections which objects excite in us, and which are known as secondary qualities. It might be thought that as heat, colour, and taste are not attributes of objects, but affections excited in us, and wholly subjective, so space and time are also subjective affections added by us to objects to which they really do not belong. Such an illustration would mislead the student, for it is based on the contrast between the reality of the object, and the subjectivity of the affection, which may vary in different minds. The rose is more real than its colour or fragrance: the wine is more real than its flavour. These qualities are neither universal nor necessary. But space and time are as universal and necessary as anything in our experience can be; they are as real and as objective as any part of our experience. To contrast them with the objects to which they belong, would be to lapse into the old error of regarding these objects as things *per se*. Concerning these latter experience knows and asks nothing; they are perfectly unknown correlatives of the phenomena which appear to us in space and time only. These latter are in no wise sensations, produced by an affection of our sensibility, but pure forms of intuition, perceived by us as figures and relations.

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[1] Mr. Hodgson shows (*Space and Time,* p. 116) that Kant need not have denied to space its universality even as a condition of internal experience. For as external phenomena come secondarily (as thoughts) under the form of Time, so internal states come indirectly under space, being always localised within our bodies. It would appear indeed that Kant felt this in his *Refutation of idealism.*

§ 7. *Farther Explanations.*—It was objected almost unanimously, by intelligent critics of Kant's First Edition, that changes were real, as is proved by our internal experience, even abandoning the evidence of our external experience. But changes being only possible in time, time must be real. To this Kant replies by admitting the whole argument, which is perfectly true, but also perfectly irrelevant. Kant never denied the reality of Time, as a part of *our* experience. But suppose that some other being could behold our minds with an intuition free from the limitations by which ours are bound, what we call changes would produce a cognition in him in which the representation of time, and therefore of change, would form no part. In other words the empirical reality of time is asserted by both Kant and his opponents; but they have sought to infer from it absolute reality, which cannot be conceded on his principles.

The objectors did not press the same argument in the case of space, because idealism had long since proved that the absolute reality of external objects was not demonstrable, whereas the objects of the internal sense are proved real by consciousness. They did not consider, that without disputing for a moment the reality of either as representations, objects can be regarded from two points of view, either as objects independent of our intuition, or as objects coming into the mind through intuition, the form and conditions of which, though really and necessarily belonging to the objects, must be sought in the subject.

The objection is in fact retorted with great force by Kant. For while his theory supports the reality of all our empirical cognition, those who hold the absolute reality of space and time are at variance with the principles of experience. They must either regard space and time as subsisting independently of things (the prevalent theory of mathematical physicists), and so assume two eternal and infinite self-subsisting nonentities, which exist merely for the purpose of containing all that is real; or they must regard them, with some metaphysical philosophers, as relations of phenomena, abstracted from experience, and confused in the process. In this latter case they must deny the validity, or at least the apodictic certainty of the mathematical *a priori* deductions which concern real things in space, for such certainty cannot be obtained *a posteriori;* and space and time are, on this hypothesis, the creatures of the imagination, abstracted from experience, generalising its relations, but for that very reason depending for application on the restrictions which nature has imposed. The former school save their mathematical conclusions, but create for themselves endless difficulties when they leave this (phenomenal) field. The latter have the advantage of not being hampered by space and time, when they desire to consider objects not as phenomena, but in relation to thought; they cannot however explain the possibility of *a priori* mathematical cognitions, or bring the laws of experience into necessary harmony with them. Kant's theory solves all these difficulties.

Finally, the transcendental Aesthetic cannot contain more than these two elements, space and time. For every other notion pertaining to our sensibility, even that of motion, which combines them both, presupposes something empirical. Space itself does not move, but *something* (*empirically given*) *in space.* Time changes not, but something perceived in time.

This remark refutes the attempts recently made to construct an *a priori* Mechanic on the presentation of Force.[1] We cannot conceive or intuite dynamical force, without motion, and for this empirical data are required, which will destroy the *a priori* purity of the deductions from such intuition. When the late Dean Mansel in another work (his well-known *Bampton Lectures*) endeavours to deduce moral laws from the datum of Personality, he is guilty (I conceive) of a different error, for the notion of Personality, though *a priori*, is not an intuition at all, but as will be seen in the latter part of this Commentary, a logical supposition of thought, giving us no definite knowledge or basis for farther deductions such as are found in pure mathematic.

§ 8. *General Remarks on the Transcendental Aesthetic.*—I. Kant here again sums up his doctrine, insisting that space and time are not necessary even to [rational] beings as such, but to the subjective sensibility of all *human beings*. They are its pure form, and therefore cognoscible apart from the sensation, which is the *matter* given *a posteriori*, and infinitely various. The form being a necessary part of all our intuitions, no possible analysis or increased clearness in them can bring us in the least nearer to things *per se*. To say then that our sensibility is only a confused representation of things, containing what really belongs to them as such, but under a congeries of attributes and partial representations, which we do not consciously explicate—to say this is to falsify the whole notion of sensibility and of phenomenon, and make it idle and void. The contrast between distinct and indistinct representations is merely logical, and does not concern their content. No doubt such a concept as that of *right* is the same in sound common sense, and when analysed by the subtilest speculation; the latter merely developes what is unconsciously felt in the former. 'But the common notion of right is not therefore sensuous, or a mere phenomenon, for in any case it is a concept of the understanding, and represents a property of actions which belongs to them as such. The representation of a body in intuition, on the contrary, contains nothing at all which could belong to an object *per se*, but only the phenomenon of something, and the way in which we are affected by it, viz., a receptivity of our cognitive faculty, which is called sensibility, and must ever differ *toto cœlo* from a cognition of the object *per se*, however thoroughly we may penetrate the phenomenon to its deepest elements.' The logical distinction therefore drawn by the school of Wolf and Leibnitz between the two divisions of our knowledge[1] is false, the distinction is transcendental, and concerns their origin and content. Abstract from objects our subjective constitution, and they must disappear with the qualities which this very constitution gave them, thereby determining their form as phenomena.

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[1] See Mansel's *Prolegomena Logica*, Appendix A.

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[1] That is between the Sensibility and the Intellect, which they regarded as capable of knowing things *per se* more distinctly. Kant does not dispute this latter point yet, as it here suffices for his argument to establish the true character of sensibility.

We distinguish indeed in phenomena that which affects the senses of all men in the same way, and that which depends on the peculiar organisation of isolated individuals. We say commonly that the former is the real object, the latter only appears to be such. But this is merely an empirical distinction. We must go farther and regard even the object as it appears to all mankind, as a mere phenomenon, in which no property at all of a thing *per se* is to be found; otherwise our transcendental distinction (just now made) is lost.

In the case for example of a rainbow, we say physically that it is a mere appearance, while the rain itself is real. But if we inquire farther into the question whether this thing which is real to the senses of all men, also represents a thing *per se* beyond these senses, 'then the question of the relation of the representation to its object becomes transcendental, and not merely the drops of rain, but their round form, and even the space through which they fall, are mere modifications or conditions of our sensibility; the transcendental object remains totally unknown.'

'The second point of importance in the transcendental Aesthetic is this, that it should not find favour merely as a plausible hypothesis, but claim to be as certain and undoubted as can possibly be demanded from a theory, which is to serve as organon,' or basis of a scientific system. Let us illustrate this by an example. Suppose that space and time were objective *per se*, and conditions of the possibility of things. It is a fact that from them (especially from space) a number of propositions demonstrable *a priori*, and synthetical, are derived. Whence can these geometrical truths, with this twofold character, be obtained? There is no way possible, except either through intuitions, or through concepts, and these either *a priori* or *a posteriori*. All *a posteriori* knowledge of either kind is at once excluded, because mathematical judgments are strictly necessary, a feature which no experience can supply. All concepts are also excluded, for from them we can only obtain analytical, and not synthetical judgments. Torture the concepts of right lines, and of the number *two* as you please, you will never obtain from them the proposition: *Two right lines cannot enclose a space.* We must therefore have recourse to intuition, and intuition *a priori*, as just established.

But if space and time were given to us as properties of things apart from our way of looking at things (our sensibility), how could we possibly know anything about these things *a priori?* Or granting, as we must do, that this *a priori* knowledge of them must come from our subjective conditions, how could we assert it to belong to a triangular object as such? Both these alternatives are impossible. From the fact that these qualities belong to *all* objects *a priori*, they must come from our sensibility; from the fact that propositions concerning them can be unconditionally asserted, that we can assert for example that the mathematical properties of a triangle belong to any triangular object in nature—from this we must infer that it can be nothing beyond our sensibility. It is therefore not probable, but indubitably certain, that space and time are nothing but the necessary, though purely subjective conditions of our intuitive experience—for this reason universal and necessary, but relating only to experience, not at all to things in themselves.

II. In his Second Edition Kant adds the following supplementary reflections.

To corroborate this theory of the ideality of both external and internal senses, and therefore of all the objects of our senses, as mere phenomena, the following remark may be of service. Whatever in our cognition belongs to intuition (the emotions of pleasure and pain, and the will, are not cognitions) is nothing but *relations*, whether they be of extension, motion, or moving forces—all of which are relations or changes of place, or else the laws that determine them. Now relations tell us nothing of a thing absolutely, it might therefore be fairly inferred that our external sense merely gives us the relation of an object to the subject. The same may be said of our internal intuition. For in the first place, the representations of our external senses are the matter which supplies our minds. Secondly, time, which is the formal condition of all our experience, and is logically prior to it, existing in the mind as a form of intuition—time contains relations of sequence, simultaneity, and permanence. Being prior to any thought of an object, it must be our intuiting, and if it contains nothing but relations, it must be the form of this intuiting, or the way in which the mind, when acting, is affected by its own activity. Whatever is represented to us through a sense, must be a phenomenon; there must therefore either be no internal sense, or else our mind or subject, when it is the object of this sense, must be given to us merely as a phenomenon and not as it would judge itself, were its intuition self-acting, and therefore purely intellectual. The great difficulty is to explain how a subject can have internal intuition of itself, but this difficulty is common to every theory. Our internal self-consciousness cannot by a pure act of spontaneity cognise all the variety which exists in the subject. It must apprehend this variety by permitting its internal intuiting faculty to be affected, and then this faculty must receive the variety *in time*, ordering it according to the laws and conditions under which alone the mind can act. The faculty is not a spontaneity but a receptivity, and not a pure receptivity, but a receptivity affecting what it receives.[1] Our self-consciousness does not therefore present to us the *ego* in any way more distinctly than our external intuition presents to us foreign bodies; we know both only as phenomena.

* The late Dean Mansel, failing to apprehend the force of this remark, was led to distinguish between the data of our external and our internal sense, and to ascribe to the latter the first origin of our ideas of substance. Descartes long ago set up our internal experience as more trustworthy than our external, but he ascribed our knowledge of self not to intuition, but to thought. This theory is more reasonable than that of Mansel, for unless our intuition be made intellectual, like Schelling's, it must act under the condition of time (as well as of the categories, as we shall see), and therefore adulterates the object, so as to prevent us from knowing it *per se*. It will be seen in the sequel that

this is not the only conclusive objection to the theory.

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[1] Kant's language in this place makes it plain, I think, that he did not regard sensibility as purely passive. Here are his words: 'When the faculty of becoming conscious of self desires to investigate (apprehend) what lies in the mind [*Gemüth*, Kant's vaguest and most general word for mental states] it must affect that same, and can only in this way produce an intuition of itself,' &c.

III. This critical view of space and time does not by any means reduce the objects given in them to mere illusion—the charge, of all others, most warmly denied by Kant. He calls it, in his *Prolegomena*, 'an objection arising from an unpardonable, and, he would almost say, intentional misconception.'[1] In phenomena both the objects and even the qualities we add to them are regarded as really given, but as these latter qualities depend upon a particular relation, we contrast things *per se* with such phenomena, without in the least denying the reality of the latter. Kant never said that bodies only *seemed* to exist without us, or that our minds *seemed* to be present in consciousness, when he asserted that space and time, the conditions (to us) of knowing them, are in the subject only. Phenomenon is not illusion. It is not asserting an *illusion* to say that a *rose* appears to be red, or scented. But if we think that Saturn has handles, as was once believed, we are subject to an illusion, which consists in attributing to the object *per se* what belongs to it anywhere in relation to our senses. If I said that a rose was. red *per se*, and not merely that it appears to us red, then I am subject to an illusion like that concerning Saturn. Just so if I assert that space is a property of objects *per se*, I attach to them what they possess only in relation to me. The common theory therefore is actually that which turns reality into illusion. For if we regard space and time as conditions of things in themselves, and consider the absurdities that follow: how two infinite things, that are neither substances nor attributes, exist and are the eternal conditions of all things, and remain even when things are removed—considering all this, we cannot blame Berkeley for degrading bodies to mere illusion ; nay even our own existence, if depending on the reality of a nonentity, time, might come to be regarded an illusion—an absurdity with which no one has as yet ventured to identify himself.

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[1] Cf. vol. iii. p. 67. It is melancholy to see a man of Trendelenburg's position clinging to these foolish objections, and followed by second-rate English writers. As Stewart thought the Berkeleian idealism a test of metaphysical acumen among the Scotchmen of his day, so Kantian idealism might serve us at present.

IV. What notion do we form of the cognitive faculties of the Deity in our natural theology? His knowledge cannot be a process of thinking, which always must imply limits ; it must be intuiting. And as we cannot regard the Divine intuition as sensuous, we are careful not to attribute to it the limitations of space and time. But how could we avoid doing this, if they were the conditions of the existence of things *a priori*, and existing independently of them? And in such case they must be the conditions of God's existence also. It remains for us to make them the subjective forms of our intuition, called sensuous, because it is not primitive, but a faculty of the subject depending on the presence of the object, and affected by it. Primitive intuition, which belongs, as far as we can see, to the Prime Being only, is that which gives of itself the existence (Dasein) of the object of intuition, without depending upon such affection.[1]

It is possible, that not only men, but all finite intelligences, have their intuition thus limited. Even if this be the case, it is not the less sensibility, because it is not a primitive (*intuitus originarius*), not therefore an intellectual intuition which belongs perhaps to the First Being only, but a derived (*derivativus*) intuition, belonging to a being dependent both in its existence and in its intuition.

This latter remark is to be considered an illustration of the Aesthetic, not an argument in support of it.

Conclusion of the Transcendental Aesthetic.—One part of the problem of the transcendental philosophy is now settled, which problem is this: *how are syn-*

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[1] In other words, a primitive intuition would perceive the object as existing, whereas we only perceive it as affecting us. Our intuition is therefore dependent on the present existence and action of the object; that of the Deity is conceived as not so dependent, but as perceiving the object directly, and without waiting to be affected by it.

thetical a priori judgments possible? We have discovered pure *a priori* intuitions, space and time, in which, when we wish to enlarge a given concept *a priori*, we discover *a priori* what is not given in the concept, and join these additional features to it synthetically. But owing to this origin, such judgments only concern objects of the senses, and are only valid for objects of possible experience.

Those who are not satisfied with these proofs and illustrations are invited by Kant to consider the absurdities which result from regarding the world of phenomena as a real aggregate of things (*per se*) in real space and time. This he does in the seventh section of his *Antinomies of the Pure Reason*,[1] at which we shall arrive in due time. If the world be a thing *per se*, it must be either finite or infinite. But both these suppositions can be proved false, for we cannot conceive space and time either as having limits, or as having none absolutely. It follows that our hypothesis was false, and that the world is not an aggregate of real things in space and time, but of intuitions necessarily subject to the forms of our faculties, which must therefore always accompany them, and appear infinite, though they are only indefinitely extensible. He also notices (p. 98, *note*) that mathematical figures presuppose not merely intuition, which gives the parts, but the gathering of these parts into a unity, which is an act of the understanding.[1] This action of the understanding is treated fully in the next chapter of the *Critick.*

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[1] *Critick*, p. 316, or else Kuno Fischer's *Commentary*, p. 230.

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[1] This remark, though contained in a foot-note, and not brought prominently forward by Kant, is of the greatest importance owing to recent objections, which assert that Kant unphilosophically isolated the mental faculties, and regarded them as acting separately. He found it necessary to treat them logically as if they were separate, but was not so stupid an observer as to mistake plain facts.

CHAPTER IV.*

POSITIVE OBJECTIONS.

Kant's Aesthetic and the Modern Sensual School.

§ 1. *Kant and the Association School.*—We pass from our exposition of Kant's doctrine of Sensibility to discuss the objections, raised to it by succeeding philosophers, and in particular to consider the claims of the Association School, who pretend to have given a satisfactory solution of the phenomena in question from a totally different point of view. This school, originated, I believe, by Hartley and Gay (if we omit Aristotle's valuable hints) and continued by Brown, James Mill, and Mackintosh, is now represented by Mr. Bain and Mr. J. S. Mill. The latter author calls it the Psychological school, as opposed to the Introspective or Metaphysical school. To this nomenclature I object *in limine.* It suggests to the unwary reader that one side only devotes itself to the historical study of the facts of consciousness, in contrast to the other. Such is not the case. In the question before us, both schools start from the same phenomena, but differ in their explanation—both appealing to psychological facts, and to them alone. I deny that Kant's theories are in any respect less psychological than those of Mr. Bain—nay rather I hope to prove that they are more so, and if the term is to be preserved as a designation of a school at all, it would be fairer and more suggestive of the facts to call Kant's school the psychological, as opposed to the *physiological* school of the Association psychologists. As however they cannot object to be called after their fundamental principle, the *association school*, I shall use this term, preserving for the other view of the constitution of our sensibility the proper term *Kantian*. I trust that in handling this controversy I shall avoid Mr. Mill's censure of not appreciating my opponents' views, or being unable to understand their attitude. His courtesy in discussing my former objections (in the Third Edition of his *Examination of Hamilton*) leaves me under the strictest obligation of doing what I can to comprehend his arguments, and to state them as strongly and clearly as possible.

It appears to be acknowledged by both parties, that we do not perceive things (if we indeed perceive them) as they are in themselves, but as they are modified by the medium through which we perceive them, or the instruments we employ in perceiving them. There is no point on which Mr. Mill, for example, quotes Kant with more approval than on the Relativity of knowledge.[1] Starting from this common principle, it is evident that the next philosophical problem which arises must be to determine, if possible, what elements in our knowledge are to be referred to our perceiving mind, and what residue proceeds from causes apart from the mind. It may be urged that there is no adequate proof of the existence of anything beyond the mind and its cognitions, and that we have no right to assume such existence in our statement. But the following considerations will show that, for convenience sake at all events, we may assume it.

We are unable to state the facts of knowledge without admitting three factors. We cannot content ourselves with the analysis into the knowing subject, and its modifications, which we call the thing known. For this additional fact must be recognised, that the forms and the order of these various modifications are not determined by the mind, but *for* the mind, by some cause foreign to consciousness. The colours for example, and the texture of the various objects which we perceive daily, the places or order in which we perceive them—these things cannot be changed at will by the mind, but must be accepted by it as the arrangement of some cause independent of its consciousness. We may hold with Berkeley that it is the action of the Deity, whether directly or through the medium of ideas; we may hold with Fichte that it is the action of a hidden faculty of the mind apart from consciousness, and reacting upon it. But these various opinions will not in the least alter or destroy the problem before us, viz., to determine how much is contributed by the constitution of the knowing or conscious mind, and how much by causes beyond or apart from the conscious mind, whatever they be. And it is more consistent with ordinary language, and less confusing to the ordinary reader, to speak of this third factor as the universe of things apart both from God and from the mind.

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[1] *Mill's Logic*, i., p. 64.

We have seen the profoundly original solution given (as regards sensibility) by Kant. He endeavoured to find some mark or distinctive feature, which would separate the additions made by the mind to our perceptions, from the data given to the mind by foreign causes. He saw that there were certain features in ordinary sensations, which not only perpetually accompanied them all indiscriminately (ἀκολουθοῦντα καὶ κοινὰ, as Aristotle says), but which could not be separated from them even in imagination, which were rather relations of sensations than sensations themselves. He perceived that if the mind added anything to our knowledge, it must be this universal and necessary character, for mind is of evidently the universal concomitant of all perception.

It followed that space and time were of this character, and that the laws of space and time, commonly called mathematics, had an irrefragable basis in the very constitution of the human mind, and were of superior certainty to the laws obtained from a mere classification of constantly recurring but contingent experiences. Without therefore going into subtiler questions about causation and other categories, he concluded that both space and time were original data of our sensibility, and that the certainty of the laws of space arose not from the frequency of our experience of them, but from their primitive nature.

It is I think admitted by all competent thinkers that Kant's theory is in one respect quite perfect. It accounts for all the phenomena under discussion. It gives an adequate explanation of the peculiarities of mathematics, and of the speculative difficulties concerning infinity. It cannot be inconsistent, when properly understood, with any part of consciousness, or any law of experience. But it is not hard to construct an adequate theory, if we allow ourselves as many assumptions as we choose. We cannot tell whether *nature* acts by the simplest means or not, and indeed there are cases where more agents seem to be called into play than we conceive necessary to produce the effect. But *philosophical explanations* must be economical, whether nature be so or not. It has been universally admitted, since the days of the first Nominalists, and perhaps long before, that in accounting for the facts of nature by theories of our own construction, we are bound not to assume more principles than are actually necessary to explain the phenomena. If two conflicting theories be equally satisfactory in this respect, we must unhesitatingly adopt the simpler.

It is then on this ground of simplicity that the Association school have attacked the theory of Kant, which is irrefragable on the ground of adequacy. They have not attempted, I think, to disprove his facts directly, but they profess to explain them differently with fewer assumptions. The attempt is certainly a strictly philosophical proceeding, and admits of only one answer. If all the facts under investigation *are* explained by the Association theory, the Kantian theory cannot be maintained. It is then a purely psychological question, involving nothing but the critical analysis of complex facts of experience, and an investigation into their simplest origin. I do not think that any Association psychologist will complain of this statement of the issue between us.

It will not be here necessary to do more than describe briefly, but as fairly and strongly as possible, the genesis of our ideas of space and of body, including those of mathematics, according to the empirical school; as I may fairly presuppose in the reader an acquaintance with the ablest and clearest exposition of the theory in Mr. Mill's critique on

Hamilton; a work at once didactic and polemical, written in the face of objections, and intended to vindicate his position before the philosophical world.

The primitive data postulated by Mr. Mill as sufficient to account for the phenomena of external perception, are three in number. There is first Time, by which he means the consciousness of successions in our feelings, unequal in rapidity and duration. Secondly, Feelings, and of these two kinds: tactual feelings, such as those of heat or cold, and muscular (which we learn to be produced by the motion (especially when voluntary) of our limbs. Thirdly, Memory, and as its consequence, Expectation.[1]

The first deductions, or derived notions from these primitive data, are some notion of Self, as a basis of memory (with which we are not at present concerned,) and Simultaneity, which arises immediately, when we feel two sensations, such as an odour and a colour, at the same time. Combining Simultaneity, as well as immediate successions of feelings, with the principle of Expectation, we obtain farther the laws of Association, by which is meant the natural tendency of the mind to think together on all occasions what has been presented to it together on one or more occasions, a tendency so confirmed by repeated experiences, as to create an inability to conceive our expectations reversed.

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[1] Mill's *Examination of Hamilton,* p. 256. I quote uniformly from the Third Edition.

Starting from these data the Association school believe they can account not only for the attribute of solidity in matter, but also for its permanence, its externality, and its extension. The primitive character of space, and the supposed necessity of its laws, which forms the basis of geometry and arithmetic, are consequently denied, or regarded as illusions produced by perpetual association, for these laws of space are said to be more frequently exemplified in nature than any other fact of experience, and are therefore naturally expected with far greater certainty.

In some parts of the problem, it cannot be denied that a very plausible explanation has been suggested for the phenomena by an acute and ingenious application of the principle of association, and I know of no more elegant specimen of philosophic reasoning than the analysis of our belief in the Permanence of the external world by Mr. Mill in the eleventh chapter of his critique of Hamilton. No intelligent opponent of the Association school can fail to perceive the great effect of such a masterly analysis on the minds of those who are still wavering, and I confess that I too, like Socrates in his dialogue with Protagoras,[1] *ἐσκοτώθην καὶ ἰλιγγίασα* ὑπὸ τοῦ λόγου, and was glad to take time to consider a reply. But we should always remember that no theory will be adopted by a school of acute thinkers which does not account for at least a large number of phenomena, and that such a theory often maintains its ground for a long time, though in the end it is proved false. The emission theory of light, for example, long resisted the wave-theory successfully, and appeared to explain the phenomena equally well. It may therefore require time and care to find a flaw even in a theory radically false, and its plausibility in explaining the facts in dispute, though the strongest argument in its behalf, is not a demonstration of its truth, so long as even a few exceptions can be proved.

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[1] Cf. Plato, *Protag.*, 339 E.

Thus even in the analysis to which I have alluded, the careful reader will find at least one important defect. Our belief in the independent existence of what we call objects is stated to be merely a belief in their *permanence*, and the far more important and primitive belief in their *externality* is thrust into the background, except in two short passages,[1] where it is incorrectly analysed into a belief that objects exist before, after, and beyond the range of our sensations. This is in other words to analyse externality into past and future permanence, as Mr. Mill expressly concedes, omitting by far the most obtrusive sort of externality—the conviction that *present* objects are given as external.

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[1] *Op. cit.*, pp. 221, 232.

I shall not deny that in a subsequent part of the book, the present externality is brought under the association theory by a similar (though far weaker) analysis, but still I contend that the chief plausibility of Mr. Mill's description of Permanent Possibilities arises from the almost complete suppression of the phenomena apparently most at variance with his theory. I proceed to discuss the various points in which I ventured to differ in a former work from Mr. Mill, and to notice the replies with which he has met my objections in his last edition.[1]

§ 2. *Necessity as a test of a priori judgments.*—There is no more important metaphysical discussion now pending than that concerning necessity, as a test of *a priori* notions and judgments. On the one side we have Leibnitz, or at least those who have followed him in this country, who, with some minor varieties, hold that these judgments must arise from the *primitive* laws of the subject beholding the object, and that hence this necessity is a law of the object, or *objective necessity*.[2] On the other side we have the school of Hartley, now represented by Mr. Bain and Mr. J. S. Mill, who hold that necessary judgments are only the result of connexions in themselves not necessary, but rendered inseparable by the law of association; hence that they are not ultimate facts of our nature, or of objects, but possess only a *subjective necessity*. The former school make such assertions as substance and causality, to be *a priori* judgments, and hence laws of the object, or of nature; the latter hold them to be merely empirical in origin, and to be various applications, or cases, of the Laws of Association. Under the former we might also mention a modified school, which, while admitting that association can give rise to a so-called necessity, does not regard such subjective necessity as a real but as a spurious one, reserving the term [objective] necessity for those principles which result from the constitution of the mind as such, in its relations to objects as such, and apart from all contingent and accidental elements. This I believe to be the position of Kant, who certainly differs from many of the first school, as well in his catalogue of objectively necessary judgments, as in the criterion by which he distinguishes them. Still, the whole system of Kant depends upon the establishing the general principle held by the former side.

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[1] Cf. Mill's *Exam. of Hamilton*, pp. 298, 302.

[2] They differ as to whether the object contributes elements, or, if so, what elements. Reid and Hamilton hold that the object determines the subject; Kant, exactly the reverse. They both agree, however, in recognising the dignity and truth of

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necessary judgments. Perhaps Leibnitz himself can hardly be said to have acknowledged any objective necessity.

Upon the fact that Space and Time are objectively necessary he builds the inferences that they are *a priori* and primitive, and hence imposed upon all objects by the mind; he holds the same to be true, *mutatis mutandis*, of the Categories.

We are therefore bound to inquire: What proof has Kant given that the necessity (which he makes the test and evidence of a primitive notion or judgment), may not be derived merely from inseparable association, or may not result from some pre-established harmony by which the subject is compelled to believe it objective, without its really being so.

(A.) 'There are only two ways,' says Kant,[1] 'in which a necessary harmony of experience with the concepts of its objects can be conceived. Either experience makes these concepts possible, or the concepts make experience possible. The former of these statements will not hold good with respect to the Categories (or the pure sensuous intuitions); for they are *a priori* concepts, and independent of experience [and this because they are *necessary* and universal]; consequently, nothing remains but to adopt the second alternative,' &c. In this passage he assumes necessity to be a proof that the concept or judgment is *a priori*, and this he had already laid down very dogmatically (Introd. § 2.), pointing, as all his followers have since done, to the fact that empirical universality is only comparative, and that experience cannot possess or produce the character of necessity. Now, the whole association school exclaim that this can only be true if necessity cannot be shown to be a consequence from higher laws. They add that Kant and all his followers have ignored inseparable association; and they further profess to exhibit cases of necessary beliefs so generated, and even found in course of time to be false. We must, then, first examine whether Kant did ignore the effects of inseparable association; and next, whether it be true that really necessary beliefs have been, in the progress of science, shown to be false.

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[1] *Critick of the Pure Reason*, p. 101.

(1.) In the Second Edition of the *Critick* there is indeed no official passage on the first point; but in the deduction of the Categories, as it stands in the First Edition, two passages translated in the third volume of this work[1] touch upon the question. Kant there shows that association of representations presupposes them to be associable, if the association is to be at all universal or necessary; and that their being associable implies an *affinity* among them, which is the objective basis of all association; so that this affinity and necessary association are a consequence of the synthetical unity of apperception, and harmonise perfectly with his principles, being necessarily implied by them. This point is the very basis of the Deduction of the Categories in the First Edition of the *Critick.*[1]

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[1] Cf. vol. iii. Appendix A, sec. ii. 4, *sub. fin.* and sec. iii.

Thus Kant literally retorts upon his antagonists the very charge they brought against him. Laying aside the question of necessity, let us ask: if we assume association as a general principle, and assert any special law as one of its consequences, let us say the law of causality, on what does this law or rule depend? By what was it suggested to us? Must there not be some affinity among phenomena, in order that we should ever begin to use such a rule? In short, must there not be some ground or reason in objects, not only to make us adopt this rule of association rather than that, but even to suggest to us any necessity or reason for associating phenomena at all? What account does Mr. Mill give of this? He postulates subjective association as an ultimate law, whereas Kant declares both subjective and objective association to be consequences from his first principle, that all phenomena, being representations, are *my* representations, and therefore subject at least to one uniform set of conditions, viz., those under which alone they can become to me objects of experience. This establishes a transcendental affinity among them, of which the empirical laws of association are but subordinate forms.

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[1] Cf. also the 2nd Edition, §§ 14, 15 (p. 86, *sq.*).

Our opponents therefore have arbitrarily postulated a first principle, and not we. For our principle is not an hypothesis arbitrarily assumed. It is a fact that nothing can be an object except it come into consciousness. It is accordingly a fact, that phenomena must conform to whatever mental laws and conditions are necessary for producing knowledge. Hence the association postulated as an ultimate principle by the school of Hartley really results from, and is dependent upon, the synthetical unity of apperception.

The only possible answer to this objection, is to assert that the *Ego* is itself a result of association—a theory which could not possibly be verified by experience, and which substitutes an inconceivable for the above perfectly conceivable and reasonable hypothesis. I am moreover relieved from discussing the question in the present controversy by the admissions in Mr. Mill's 12th chapter (p. 241), that the phenomena of memory and of expectation are not explained by the Laws of Association, and require some such assumption as that of an *Ego* to make them comprehensible. This admission is a powerful support to my present argument, which has not been refuted, or even discussed by Mr. Mill.

Let me add a farther application of the principle. The very law of Redintegration, laid down by psychologists of both schools as the ultimate law of association, appears to be an immediate inference from the synthetical unity of apperception, if not an inadequte statement of it. Whenever, we are told, several objects have been present to our mind simultaneously, so as to make up one total thought, any one of these presented at a subsequent time is likely to suggest the others. But all the objects present to us simultaneously have not this property, There are great numbers of objects which have been presented at the same time to us, but which do not at all suggest one another afterwards. Why not? Because they have not formed parts of one total thought. Is this indeed the case? Is it not more intelligible to answer, because the mind did not originally conjoin or connect them? The unity of apperception did not apply to them, for they were not brought under any one of the Categories (which are its phases); hence, there being no *affinity* among them, no association was possible. The law of Redintegration then if objective is based directly upon the synthetical unity of apperception.

While therefore the Kantian theory explains all the phenomena, the Association school confess themselves unable to bring those of Memory and Expectation under their theory. Here the law of Parcimony cannot be urged against the Kantian school, whose theory is not more complex than that of their opponents, and is in any case the only one which even professes to explain all the phenomena.

Having now shown that the law of association is not only recognised by Kant, but brought under his own principles, we proceed to the next point under discussion.

(2.) Mr. Mill[1] thinks he can overthrow the claims of primitive necessary judgments, by defining them as those of which the contradictory is inconceivable, and by then showing that inconceivability is no test of impossibility—in fact, that many inconceivable things have turned out to be true (or generally believed). But he has not avoided an ambiguity, very well explained in his own Logic farther on (p. 304), where he shows that inconceivable may mean either *unbelievable* or *unimaginable*, and that the inference from one of these to the other is not valid. The antipodes were once unbelievable. That two right lines should enclose a space is unimaginable. If the former turned out true, it does not follow that the latter rests merely upon association; and yet Mr. Mill thinks, because some inconceivables (of the first kind) are proved true, that others (of the second kind) do not rest upon any higher ground than an additional quantity of the same evidence.

I stated in a previous work that I held with Kant this distinction to be one of kind, and not merely of degree. To this Mr. Mill has replied (*Exam. of*

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[1] *Logic*, vol. i. pp. 268, *sq.*

Hamilton, p. 177, *note*), that I must surely confess that the distinction 'admits of being construed as a difference only of degree.' We know, he adds, that associations, if constantly repeated, will produce a mental difficulty in imagining their reverse: why should not an indefinite accumulation of such associations raise the difficulty to an impossibility? In opposition to this view, I believe it psychologically false that the distinction is arrived at by a gradual accretion of associations. I had stated in a passage immediately succeeding facts which seem to me strongly to support my side. 'A mathematical friend told me he perfectly well remembered being taught when a boy, without understanding it, that two right lines cannot enclose a space. When Euclid's 4th proposition was shown him, he remembers the necessity of the axiom suddenly flashing upon him.' I shall develop this point at greater length hereafter, and shall show that the assumption of the association school, who suppose us to be always observing the mathematical outline and the number of the objects around us, is not warranted by facts. We require to have our attention specially directed by outline figures to the mere space relations of objects.

At the same time I challenged Mr. Mill to point out a case 'where an unimaginable inconceivability had been proved true,' or even possible. To this he replied that my point would have been more effectually maintained had I made this challenge concerning anything which *seemed* unimaginable, adding ‘that whatever was once proved true or even possible, must thereby have become imaginable.’ I do not agree absolutely with this latter statement, for those contradictory propositions, of which Sir William Hamilton proved that one must be not only true but necessary, would not be to me the least more imaginable if I were persuaded by his arguments. But I suppose Mr. Mill means, as I did when I put forth the challenge, *empirical* proof. He says fairly enough as regards most of his antagonists, that the challenge is hard to answer, because they have not drawn a fixed line of demarcation between their unimaginables and their incredibles, and are wont to transfer the former to the latter class, if any of them happen to be proved possible. In my case he should have found no such difficulty, inasmuch as I had endeavoured to draw such a fixed line.

I had myself raised this very difficulty,[1] and had observed: ‘How can we ever find a criterion to distinguish objective and subjective necessity? Surely, if all men combine a certain condition with an object, it must appear objectively necessary? I think not, *except the result implies it as a part of the construction.* And this I suppose is the criterion we must have of objective necessity in synthetical judgments, which are those upon which the whole discussion of Kant turns. There are certain objects of consciousness which manifest to us, not only themselves, but, *ipso facto*, their construction, as the only possible one which could ever have produced them. A triangle, for example, shows by the very intuition of it, that we must not only originally have constructed it with three straight lines, and in space, but that through that process alone can we now cognise it; and if any one were to assert that these facts were only necessarily associated with it, we should consider him not worth a reply.'

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[1] *Fischer's Comm. on Kant, Introd.*, p. xiii.

I had added in a note, that *in confining objective necessity originally to intuition*, I rather agreed with Locke than with Kant. I am sorry Mr. Mill overlooked this part of my argument. According to this canon, none of the inconceivables which he mentions as being in the border land should count as strictly unimaginable. There is no impossibility in imagining matter thinking, or creation *a nihilo*, except want of data. The case of Cause and Effect is not so easily answered, because it is complex. So far as it depends on our intuition of Time as successive, any violation of this condition, which Mr. Mill himself regards as primordial, is of course unimaginable. The remaining elements of the judgment are certainly not inconceivable in the same sense. Mr. Mill must also agree with me that a reversal of the law of Contradiction, which he at length admits[1] to be primordial, is also unimaginable in the strictest sense.

Having vindicated my position thus far, I must insist on an important distinction, which I had omitted to state, but had implied in my former discussion, and which will explain most of the disputed cases. A thing may be unimaginable *because it reverses a primitive intuition*, in which case it can never become possible, for even if the constitution of our minds were changed, and the intuition vanished, its contradictory would vanish also. But a thing may be also unimaginable, *because we have no faculty wherewith to approach it*, and this may possibly be proved true.[1] To a man born blind, colour is not merely incredible, as the antipodes used to be, because it was thought that men would fall off, but unimaginable, because he cannot form the slightest notion of the nature of that intuition. But it *contradicts* nothing that he knows. Of course I do not include this kind of unimaginables in the remarks I have made about mathematical truths. Some of the examples suggested by Mr. Mill have been variously answered because of this ambiguity, and his confusion of these two species makes his answer plausible. I trust I have now left no doubt as to what my beliefs on the subject are, and even should errors arise in the application of this criterion, I should not the less maintain the soundness of the principle.

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[1] *Exam. of Hamilton*, p. 84.

[1] The distinction is mentioned by Mr. Mill, and passed by, *Exam. of Hamilton*, p. 83.

I may add that even though proof may render an unimaginable of the second kind true (credible), it does not thereby render it imaginable. Creation *a nihilo* is as unimaginable to a Christian as to a Materialist. It is not therefore sufficient for the refutation of my argument to prove that unimaginables have come to be received as true, it must be shown that they are now imaginable.

§ 3. *Space and Extension primitive, and not derived, Intuitions.*—There is no philosophical problem on which the school with which I am contending have spent more labour and ingenuity than that of the origin of our notion of Extension. Encouraged by Berkeley's celebrated analysis of Distance, which he contended to be not a primitive but a derived intuition, they have attempted to go farther, and make length and breadth, as well as depth, a result of muscular motion combined with tactual sensations. The various sensations accompanying the expanding and contracting muscle, the extended or retracted limb, are supposed to give us a measure in time, which we combine with the tactual perception of simultaneity as given in coexisting sensations. I need not occupy the reader with any fuller statement, as he will find the whole association theory amply stated and defended in Mr. Mill's

13th Chapter, entitled '*The Psychological Theory of the Primary Qualities of Matter.*'

The principal objection which has been urged on the other side is, that this theory assumes the notion to be explained, that the sensations postulated by Mr. Mill and Mr. Bain carry with them Externality from the very commencement, and that therefore this notion is not generated by association. These objections have been noticed at considerable length by Mr. Mill,[1] who has, among various particular points, made two general statements concerning our attitude in the controversy. In the first place, he thinks that we have failed to place ourselves at the standpoint of the Association School, and therefore to catch the spirit and meaning of the doctrine; and in the second place, that we have consequently made a stupid blunder in our attempts to fasten on the theory a *petitio principii.* Had we understood the question thoroughly, we should have seen, not only that he had kept clear of such a logical mistake, but 'that he could not, under any circumstances whatever, have been reduced to this necessity,' and this very startling statement is explained by the observation, that 'for every statement which can be made concerning material phenomena in terms of the Realistic Theory, there is an equivalent meaning in terms of Sensation and Possibilities of Sensation alone, and a meaning which would justify all the same processes of thought.' I must here separate myself from the class of philosophers censured, for the Externality of which I spoke was only Extension, and not the Reality of the world in the vulgar sense, as a substance apart from our sensations. This notion a Kantian must explain in quite a different connexion. Having made this reservation, I proceed to consider Mr. Mill's general strictures.

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[1] The Appendix to his Chapters on the belief in an external world, and in a mental substance, discuss more generally the same controversy, which is afterwards carried into greater detail in the Chapter on the primary qualities of bodies. I shall therefore reply to these passages simultaneously, as far as possible.

With regard to our inability to place ourselves at the point of view required by our opponents, I contend that it may arise not from our stupidity, but from their distortion of facts. Both parties were anxious, at least primarily, not to assume one another's standpoint, but rather to reach that of nature—that of an infant, or of an individual beginning to use his faculties in the world. In endeavouring to do this, my analysis leads me to a condition of things (as I shall presently show) inconsistent with the condition postulated by the Association School. I am accordingly unable, in one sense, to place myself at their standpoint, not because of its difficulty or obscurity, for it appears to me far easier than some other systems which I have studied, nor

I hope on account of any inherent obstinacy, but because it appears to me inconsistent with psychological facts.

The second statement of Mr. Mill, that he could not possibly have made a *petitio principii*, is surely totally untenable, if I am able to show that 'there is not, for every statement which can be made concerning the extension of phenomena in terms of the Kantian theory, an equivalent meaning in terms of sensations and possibilities of sensation alone, *and a meaning which would justify all the same processes of thought.*' It is quite possible, despite of Mr. Mill's assertion to the contrary, that in accounting for the origin of our belief in extension a philosopher may assume feelings which cannot exist without presupposing *an obscure apprehension or belief in this very extension.* But as Mr. Mill observes, it is not easy to fix the fallacy upon the Association School, because all the terms in the discussion are used ambiguously. When they are pressed that velocity or direction postulate space, they reply that they only intended to describe successive feelings, and yet presently, when the result comes out, it is found that a hidden x (as Kant would say) has accompanied the feelings, and helped them to their conclusion.

I endeavoured to show this in my previous discussion of these difficulties, and was met by ingenious replies on the part of Mr. Mill. As it is plain that I cannot persuade him by this line of argument, I shall only notice some points in which his reply appears to me deficient, and proceed to develop my objections from another point of view.

(*a.*) As to my first remark,[1] though Mr. Mill and his School insist that their language about the movement of our limbs only refers to the mere succession of feelings, I still think that the main plausibility of the theory arises, as I have just said, from the reader carrying along with him through the argument the ordinary meaning of the terms employed. If it avoids a plain *petitio principii* in the hands of Mr. Mill, it owes its wider acceptance to the logically weaker, but psychologically sounder attitude of other minds.

(*β.*) In replying to my second objection: 'what possible meaning can direction have except *in space?*' Mr. Mill has changed my statement unwittingly into the assertion that direction can only mean space, and thinks that the converse of this statement is nearer the truth. I think the primitive element in space is extension, and not direction, if we mean by the latter muscular exertion of a certain kind, for I believe that muscular exertions at all proximate in direction are not discriminated as different till they are found to correspond to differences *already noted* in vision.

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[1] *Introd. to Fischer's Comm.*, p. xviii.

Mr. Mill is silent as to the second part of my objection, that on his theory a right line should not be the simplest, but the most difficult (even if the least exertion) to attain of our notions of direction, as it hardly ever occurs in muscular exertions.

(γ.) I still believe that the notion of velocity cannot be obtained without presupposing space, and feel convinced, after many careful experiments, that both Mr. Bains' and Mr. Mill's proposed derivations of it rest upon assumptions psychologically untenable. These objections will be developed presently.

(δ.) When I pointed out that the measure of extension must not be identified or confounded with extension itself without strong reasons, Mr. Mill accepts the challenge, and says all the facts can be accounted for by such identification. If they can, it is only under the assumption that our perception of extension by sight comes into play later than our muscular experience. This is repeatedly implied by Mr. Mill, and is as much opposed to observation as his former hypotheses.

As however I have failed to convince him by my previous method of arguing, I shall now adopt a different line of attack, and endeavour to show that the psychological conditions assumed by the Association School to account for the genesis of our notions of extension and space, are founded on hasty or incorrect observation. If it can be shown that what we know of infants, and persons cured of blindness, is in any important respects inconsistent with the conditions these philosophers assume, it will hardly be maintained by Mr. Mill that he could not possibly have been guilty of the fallacy *non causa pro causa*, which is not far removed from *petitio principii.*

§ 4. *The Sense of Vision in the Hands of the Association School.*—Any one who reads carefully Mr. Mill's or Mr. Bain's description of the genesis of the idea of extension, will perceive in the first place, that muscular exertions are throughout assumed prior in time to the exercise of vision. It is plainly implied, if not stated, several times in Mr. Mill's chapter on the subject,[1] that the infant is meditating on series of muscular sensations, before the faculty of sight 'comes in,' as he calls it, and comprises these series in a single picture. It would almost seem as if infants were born like kittens and puppies, with closed eyes, and that this state lasted not nine days but nine months. Before sight has told them anything, they are supposed to feel simultaneity, velocity, and other sufficiently complex sensations, and even to institute comparisons among them. 'The eye *then* only *comes in*,[2] and with its greater powers of simultaneous sensation, gathers up, by its acquired perceptions, a host of such measurements in one intuition.'

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[1] *Exam. of Ham.*, pp. 278-9, 283. The reader will see in the sequel why I here exclude the muscular motions of the eye from the catalogue of conscious muscular exertions.

[2] Cf. *op. cit.*, p. 301.

If I mistake not, this condition of things is copied from the case of a man born blind, who receives his sight in a mature state, not from that of infants. I appeal to any fair observer whether in opposition to such a description, the human infant does not use its sight long before it is capable of any systematic muscular movements. Swathed up for months in such a way as almost to preclude such movements, the infant learns its first lessons by the exercise of vision, and of those tactual sensations, which are now universally discriminated from the muscular feelings, and which rather produce pleasure and pain, than knowledge of what we call the external world. The natural inference from this state of things is, that with very slight motions of the eye alone—motions so slight that they could not possibly serve as means of discrimination—a very considerable knowledge of figure and therefore extension is obtained. Gradually, as the limbs come under control of the will, experiments are made to lay hold of visible objects, and by experience we learn what muscular efforts correspond to certain peculiarities in the visible picture. But these lessons principally concern depth or distance, which is very imperfectly taught, if given at all, by the eye. I do not believe that the length or breadth of a small object ever meant the amount of muscular energy necessary to pass the hand from one side of it to the other. The visible picture, as it is the clearest and best, so it is also the primary measure of such an object. It is only when its magnitude exceeds the limits of momentary intuition, that we are obliged to have recourse to time, and measure the object by the time necessary to traverse it.

It is a matter of fact that the image on the retina of every eye is originally perceived as *extended colour*, either element being absolutely imperceptible without the other. I said just now that with the aid of very slight motions the eye would learn to know figures accurately. I think this admission is required by the facts, and does not in any way conflict with the theory I am maintaining. But even without any motion of the eye, an extended field of vision is most positively given on the retina, and this field is by no means so small that a circle $\frac{1}{10}$th of an inch in diameter, as Mr. Bain allows, cannot be perceived by a single act of vision without movement.[1] I urge that this positive fact, which no philosopher can deny, should be made the starting-point of our knowledge of extension, and it should require the very strongest evidence to make us abandon this primitive datum in nature, and to have recourse to hypotheses, however plausible, which are inconsistent with it.

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[1] The size of the extended image on the retina is of little consequence in the discussion, provided the principle be admitted; but I may add that Mr. Bain and Mr. Mill greatly understate the amount which the eye can grasp without motion. On an absolutely black field of vision, luminous points at a considerable distance from one another are plainly perceptible without moving the eye at all. Any one may verify this assertion

How do the Association School meet this capital difficulty? It is amusing to analyse the subterfuges by which Mr. Bain endeavours to elude it. His first attempt is to assume boldly that extension means nothing but the time and muscular energy required to pass from one point to another. If this is not begging the question under discussion, I know not what that fallacy means. 'I do not see,' says he in a passage quoted by Mr. Mill,[1] 'how one sensation can be felt as out of another, without already supposing that we have a feeling of space.' Neither do I. And it is precisely on this ground that Kant contends that the idea of space cannot be a generalisation or abstraction from experience. 'If I see two distinct objects before me,' he pro-

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by walking into a dark room, and fixing his eyes on the fire. Several extended pieces of red hot coal will be distinctly visible, separated by black intervals. The contrast of light being great, those parts of the retina which are not furnished with papillæ as fully as its centre, are still able, without any motion of the eye, to convey a clear image to the mind. I request the reader to make the experiment, and satisfy himself on this point.

[1] *Op. cit.*, p. 288.

ceeds, 'as two candle flames, I apprehend them as different objects, and distant from one another by an interval of space, but this apprehension presupposes an independent experience and knowledge of lineal extension.' I deny that it pre-supposes any such thing, for lineal extension is given with the intuition of the two flames, the very first time they are perceived. '*There is no evidence*,' says he, '*to show* that, at the first sight of these objects, and before any association is formed between visible appearances and other movements, I should be able to apprehend in the double appearance a difference of place.' This is positively audacious. Mr. Bain considers us so completely ousted by his theory, that he calls upon us to prove by evidence that the image on the retina is perceived as extended! 'I feel,' he admits, 'a distinctness of impression, partly optical and partly muscular, but in order that this may mean to me a difference of position in space, it must [that is, to satisfy Mr. Bain's theory, and for that purpose only] reveal the additional fact, that a certain movement of my own would carry my hand from one flame to another; or that some other movement of mine would change by a definite amount the appearance I now see.' This vague, and to me unintelligible clause appears to portend a new explanation in store for us, when the present one fails. 'If no information is conveyed respecting the possibility of movements of body generally, no idea of space is given,' and here is the reason, 'for we never consider that we have a notion of space, unless we distinctly recognise this possibility.' This I positively deny, and even were it so now, it would not prove Mr. Bain's point, for it might have been generated by association of ideas, even if extension were at first perceived by the infant's eye without such notions being attached to it. 'But how,' Mr. Bain concludes, 'a vision of the eye can reveal beforehand what would be the experience of the hand on the other moving members, I am unable to understand.' But this is perfectly unnecessary, it being quite sufficient for the facts of experience, though not for Mr. Bain's theory, that by experience we should learn what is the correspondence between them. Furthermore, Dr. Franz's case, to be discussed presently, shows that even this curious anticipation, incomprehensible as it seems, can find support in carefully observed facts.

This passage is from the First Edition of what Mr. Mill[1] calls Professor Bain's 'great work on the mind.' In his Second Edition, the author appears to have had an inkling that his theory was not safe from attack, and he accordingly adds an 'instructive note' with some more assumptions. He is obliged to concede that there is a purely optical extended impression, not requiring muscular movement, when we look at a circle or square of a very small size. 'Why then may we not say that through luminous tracing alone, we have the feeling of visible form?' Here Mr. Bain himself brings the question to an issue. What is his reply? 'By making an extreme supposition of this nature, it is possible to remove the case from a direct experimental test.' The objection is curiously irrelevant. The contending parties are endeavouring to discover what sight could teach us originally without muscular movements, and what these movements could teach us without sight. For this purpose Mr. Bain himself has made suppositions far more extreme than that to which he objects, and no less removed from direct experimental tests.

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[1] Mill, *op. cit.*, p. 266.

But even so, Mr. Bain sees strong grounds for maintaining his opinion. 'In the first place, our notions of form *are manifestly obtained* by working on a large scale, or by the survey of objects of such magnitude as to demand the sweep of the eye, in order to comprehend them.' This I hold to be psychologically false, and assumed to sustain a tottering theory. It is not true that 'the idea of a circle is first gained by moving the eye round some object of considerable size, and that having done this, we transfer the fact of motion to smaller circles, although they would not of themselves require an extensive ocular sweep.' In fact the very reverse is true; for on Mr. Bain's theory we should forthwith proceed to the absurdity that a large circle, requiring motion of the eyes round it, *is more easily recognised as such than a small one.* It also contradicts the fact brought out prominently in Dr. Franz's case, that to move the eye round large objects is an effort, at first disagreeable, and producing difficulties in perceiving them as objects, whereas small things are perceived, practically, by a single act.

Mr. Bain's second reply recurs to his old *petitio principii.* 'We mean by a round form something that would require a given sweep of the eye to comprehend it; and unless we identify the small spot with the circles already seen, we do not perceive it to be a circle.' I again deny both the fact and the inference, the former as only to be received when Mr. Bain's theory is established, and the latter because I hold that our first intuition of a circle is a small image given at once on the retina as extended, with which we compare larger circles afterwards.[1]

Mr. Mill's arguments on the subject, in addition to the above quotations from his Scotch supporter, are not very considerable, and are rather defensive than offensive. In the first place he endeavours to weaken the force of Sir Wm. Hamilton's clear statement that we must be cognisant of extension by sight, because we are conscious from the very beginning of colours, and of differences in colour. This argument cannot possibly be refuted. But Mr. Mill lays great stress on the fact that a perfectly fixed eye can only embrace a very small field of vision, at least distinctly, and thinks the conclusion warranted, that 'were the eye immovable, and were we without accompanying muscular sensations, the impression we should have of a boundary between two colours would be so vague and indistinct as to be merely rudimentary.' I think if the line of separation *crossed the very centre* of the eye picture, the perception of this line would be from the beginning quite distinct, and though very short, quite sufficient to give us our first notion of extension, rudimentary if Mr. Mill likes, but still far clearer and more definite, as well as earlier, than any corresponding knowledge obtained by the movements of our limbs. Mr. Mill falls back on the same idea of extension as that given by Mr. Bain, and having *assumed* this to be the correct one, advances to the following startling statement: 'to confer on these discriminative impressions (acknowledged on all hands to be given by sight) the name which denotes our matured and perfected cognition of Extension, *or even to assume that they have in their nature any thing in common with it*, seems to be going beyond the evidence.' It appears to me that a man must be very much debauched with philosophy indeed if he cannot see that he is going directly against the evidence in *denying* this identity or analogy.

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[1] The reader will observe that Mr. Bain here speaks of the muscular motions of the *eye* as teaching us extension. This organ is quite thrown into the background when he comes to speak of muscular motions as a *measure* of extension, since the minute and momentary movements of the eye manifestly afford no such measure. I shall revert to this point hereafter.

'When a larger collection of carefully observed facts respecting persons blind from birth, shall have been subjected to an acuter and more discriminating analysis, the additional insight which we may hope to obtain into the psychology of such persons, will probably dissipate the remains of obscurity which still hang over some details of the subject.'[1] I cannot but think that this remark was written before the note on Dr. Franz's case,[2] which curiously enough is a more exact observation than had hitherto been made, and which militates so strongly against Mr. Mill's theory, that he candidly confesses its facts if established would demand a considerable modification of his text. Therefore, I am at a loss to know why he did not study a case so important, and so easily accessible in its original form, instead of taking it secondhand from Dr. M'Cosh's imperfect description, and contenting himself with adding a few notes of interrogation and a few sceptical reflections on the accuracy of the report. A perusal of Dr. Franz's[1] paper would have removed most of his difficulties. It is so important, and so little known, that I proceed to give a complete abstract of its psychological side, in the author's own words.

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[1] Mill, *op. cit.*, p. 302.

[2] p. 287, *note.*

§ 5. *Dr. Franz's Case of a Gentleman born blind, and successfully operated on at the Age of eighteen.*—'Mr. F. J., the subject of the present memoir, is the son of a physician; endowed with an excellent understanding, quick power of conception, and retentive memory. The father, to whose statement, on account of his professional knowledge, more weight is to be attached, informed me that both eyes were turned inwards to such an extent that a portion of the cornea was hidden by the inner canthus, and that in both pupils a yellowish-white discoloration was to be observed, which, being situated behind the iris, could not be the pupillary membrane. That the strabismus and cataract of both eyes in this case were congenital, is evident from the testimony both of the parents and of the nurse, whom I have closely questioned on this subject. The latter, who can distinctly remember all the circumstances of the case, told me that when the child was a few months old, she held a light before its eyes, of which it took no notice. I ascertained also from her that the eye-balls had not that restless motion which is generally observed in those who are born blind, but that both eyes were always turned inwards, and that but rarely either the one or the other was moved from the internal canthus.'

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[1] *Trans. Royal Society for* 1841, Part I., pp. 59, *sqq.*

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Dr. Franz then proceeds to mention some operations performed on the eyes of his patient while an infant, after which he says:—

'The patient acquired a certain sensation of light, which he did not seem to have had before the operation. He had not the slightest perception of light with the right eye; it was perfectly amaurotic. With the left eye he had a perception of light, and was even capable of perceiving colours of an intense and decided tone. He believed himself moreover able to perceive about one-third of a square inch of any bright object, if held at the distance of half an inch or an inch from the eye, and obliquely in such a direction as to reflect the light strongly towards the pupil. But this I am convinced was a mere delusion; for, from the state of the interior of the eye, it was evident that all rays of light falling in the direction of the optic axis in the pupil must be intercepted, and reflected by the opaque capsule. By these rays, therefore, a perception of light indeed might be conveyed, but certainly no perception of objects. On the other hand, it seems probable that a lateral cleft in the capsule permitted rays of light to pass into the interior of the eye.

'[But assuming] that the cleft in the capsule held the same relation to the eye in this instance, as a small hole in a card placed immediately before a healthy eye; in this case the patient would not only have seen an object at the distance of half an inch or an inch, but even at a much greater distance. That he was incapable of this I have satisfied myself by repeated experiments, which have led me to the conclusion that his belief that he really saw objects resulted solely from his imagination, combined with his power of reasoning. In feeling an object and bringing it in contact with the eyelids and the cheek, while holding it close before his eye, by his refined sense of touch an idea of the object was produced, which was judged of and corrected according to the experience he had gained by constant practice. This opinion is confirmed by the observations of those who have known and watched him for years, and also by a fact which I have myself frequently observed, viz., that all well-educated blind persons, who are not absolutely amaurotic, endeavour to persuade others that they see more than they really can, in order to conceal as much as possible their deficiency in the noblest of the senses, and from a reluctance to be regarded as objects of compassion.

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'On terminating this inquiry into the condition of the visual organ and the actual state of vision, I may here be allowed to mention that the patient's sense of touch had attained an extraordinary degree of perfection, and that in order to examine an object minutely he conveyed it to his lips. The sensation produced by silk stuffs was most pleasing to him. He was said to possess the power of distinguishing colours by the touch, but this assertion was not confirmed by his own testimony.

[Dr. Franz's operation is then described.]

'On opening the eye for the first time on the third day after the operation, I asked the patient what he could see; he answered that he saw an extensive field of light, in which everything appeared dull, confused, and in motion. He could not distinguish objects. The pain produced by the light forced him to close the eye immediately. Two days afterwards, the eye, which had been kept closed by means of court-plaster, was again opened. He now described what he saw as a number of opaque watery spheres, which moved with the movements of the eye, but, when the eye was at rest, remained stationary, and then partially covered each other. Two days after this the eye was again opened; the same phenomena were again observed, but the spheres were less opaque and somewhat transparent; their movements more steady; they appeared to cover each other more than before. He was now for the first time capable, as he said, to look through the spheres, and to perceive a difference, but merely a difference, in the surrounding objects. When he directed his eye steadily towards an object, the visual impression produced by the object was painful and very imperfect, and no clear visual perception of it took place, because the eye, on account of the intolerance of light, could not be kept open long enough for the formation of the idea as derived from visual sensation. The appearance of spheres diminished daily; they became smaller, clearer, and more pellucid, allowed objects to be seen more distinctly, and disappeared entirely after two weeks. The *muscæ volitantes*, which had the form of black, immovable, and horizontal stripes, appeared every time the eye was opened, in a direction upwards and inwards. When the eye was closed, he observed, especially in the evening, in an outward and upward direction, an appearance of dark blue, violet, and red colours; these colours became gradually less intense, were shaded into bright orange, yellow, and green, which latter colours alone eventually remained, and in the course of five weeks disappeared entirely.

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'As soon as the intolerance of light had so far abated that the patient could regard an object without pain and for a sufficient time to gain an idea of it, the following experiments were made in the presence of Dr. Swaine. The first experiments were of that class in which the idea of a visible object is derived merely from pure visual sensation; the succeeding, of that kind in which the idea, in ordinary cases, depends upon the sense of sight combined with the sense of touch, and is gained by reflecting on the impressions made on the organs of both senses. It was necessary to perform these experiments on different days, as otherwise they would have distressed the eye too much.

'*First Experiment.* Silk ribands of different colours, fastened on a black ground, were employed to show, first the primitive, and then the complementary colours. The patient recognised [?] the different colours, with the exception of yellow and green, which he frequently confounded, but could distinguish when both were exhibited at the same time. He could point out each colour correctly when a variety was shown him at the same time. Grey pleased him best, because this colour he said produced an agreeable and grateful sensation; the effect of red, orange, and yellow was painful, but not disagreeable; that of violet and brown not painful, but very disagreeable; the latter he called ugly. Black produced subjective colours, and white occasioned the recurrence of muscæ volitantes in a most vehement degree.

'*Second Experiment.* The patient sat with his back to the light, and kept his eye closed. A sheet of paper, on which two strong black lines had been drawn, the one horizontal, the other vertical, was placed before him, at the distance of about three feet. He was now allowed to open the eye, and, after attentive examination, he called the lines by their right denominations. When I asked him to point out with his finger the horizontal line, he moved his hand slowly, as if feeling, and pointed to the vertical, but after a short time, observing his error, he corrected himself. The outline in black of a square, six inches in diameter, within which a circle had been drawn, and within the latter a triangle, was, after careful examination, recognized and correctly described by him. When he was asked to point out either of the figures, he never moved his hand directly and decidedly, but always as if feeling, and with the greatest caution; he pointed them out, however, correctly. A line consisting of angles, or in other words a zigzag, and a spiral line, both drawn on a sheet of paper, he observed to be different, but could not describe them otherwise than by imitating their forms with his finger in the air. He said he had no idea of these figures.

'*Third Experiment.* The windows of the room were darkened, with the exception of one, towards which the patient, closing his eye, turned his back. At the distance of three feet and on a level with the eye, a solid *cube* and a *sphere*, each of four inches in diameter, were placed before him. Allowing him to move the head in a lateral direction no farther than was necessary to compensate the point of view of the right amaurotic eye, I now let him open his eye, and requested him to state decidedly what he observed. After attentively examining these bodies, he said he saw a *quadrangular* and a *circular* figure, and after some consideration he pronounced the one a *square* and the other a *disc.* His eye being then closed, the cube was taken away, and a disc of equal size substituted and placed next to the sphere. On again opening his eye, he observed no difference in these objects, but regarded them both as discs. The solid cube was now placed in a somewhat oblique position before the eye, and close beside it a figure cut out of pasteboard, representing a plane outline prospect of the cube when in this position. Both objects he took to be something like flat quadrates. A pyramid, placed before him with one of its sides towards his eye, he saw as a plane triangle. This object was now turned a little, so as to present two of its sides to view, but rather more of one side than of the other; after considering and examining it for a long time, he said that this was a very extraordinary figure; it was neither a triangle, nor a quadrangle, nor a circle; he had no idea of it, and could not describe it; in fact, said he, I must give it up. On the conclusion of these experiments, I asked him to describe the sensations the objects had produced, whereupon he said that immediately on opening his eye, he had discovered a difference in the two objects, the cube and the sphere, placed before him, and perceived that they were not drawings; but that he had not been able to form from them the idea of a square and a disc, until he perceived a sensation of what he saw in the points of his fingers, as if he really touched the objects. When I gave the three bodies (the sphere, cube, and pyramid) into his hand, he was much surprised that he had not recognized them as such by sight, as he was well acquainted with these solid mathematical figures by his touch. These experiments prove the correctness of the hypothesis I have advanced elsewhere on the well-known question put by Mr. Molyneux to Locke, which was answered by both these gentlemen in the negative, and has been much discussed since their time.

'*Fourth Experiment.* In a vessel, containing water to about the depth of one foot, was placed a musket-ball, and on the surface of the water a piece of pasteboard, of the same form, size, and colour of the ball. The patient could perceive no difference in the position of these bodies; he believed both to be upon the surface of the water. Pointing to the ball, I desired him to take up this object; he made an attempt to take it from the plane of the water, but when he found he could not grasp it there, he said he had deceived himself, the objects were lying in the water; upon which I informed him of their real position. I now desired him to touch the ball, which lay in the water, with a small rod; he attempted this several times, but always missed his aim; he could never touch the object at the first movement of his hand towards it, but only by feeling about with the rod. On being questioned with respect to reflected light, he said that he was always obliged to bear in mind, that the looking-glass was fastened to the wall, in order to correct his idea of the apparent situation of objects behind the glass.

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'When the patient first acquired the faculty of sight, all objects appeared to him so near that he was sometimes afraid of coming in contact with them, though they were in reality at a great distance from him. He saw everything much larger than he had supposed from the idea obtained by his sense of touch. Moving, and especially living objects, such as men, horses, &c., appeared to him very large. If he wished to form an estimate of the distance of objects from his own person, or of two objects from each other, without moving from his place, he examined the objects from different points of view by turning his head to the right and to the left. Of perspective in pictures he had of course no idea; he could distinguish the individual objects in a painting, but could not understand the meaning of the whole picture; it appeared to him unnatural, for instance, that the figure of a man represented in the front of the picture should be larger than a house or a mountain in the background. All objects appeared to him perfectly flat; thus, although he very well knew by his touch that the nose was prominent, and the eyes sunk deeper in the head, he saw the human face only as a plane. Though he possessed an excellent memory, this faculty was at first quite deficient as regarded visible objects; he was not able, for example, to recognize visitors, unless he heard them speak, till he had seen them very frequently. Even when he had seen an object repeatedly, he could form no idea of its visible qualities in his imagination, without having the real object before him. Heretofore, when he dreamed of any persons, of his parents, for instance, he felt them and heard their voices, but never saw them; but now, after having seen them frequently, he saw them also in his dreams. The human face pleased him more than any other object presented to his view; the eyes he thought most beautiful, especially when in motion; the nose disagreeable, on account of its form and great prominence; the movement of the lower jaw in eating he considered very ugly. Although the newly-acquired sense afforded him many pleasures, the great number of strange and extraordinary sights was often disagreeable and wearisome to him; he said that he saw too much novelty which he could not comprehend. And even though he could see both near and remote objects very well, he would nevertheless continually have recourse to the use of the sense of touch.

'Walking alone in the crowded streets, especially in the city, he found very tedious. He said, seeing so many different things, and the quick movements of the multitude of people, carriages, &c., confused his sight to such a degree, that at last he could see nothing; that the sensation produced by the object last seen had not yet disappeared from the retina, when the next object made its impression thereon, by which means confusion of ideas, great anxiety, and even vertigo were occasioned, from which he could only free himself by closing his eyes for a few moments.'

The difficulties raised by Mr. Mill are for the most part soluble from this fuller abstract. His recognition of a horizontal line, and description of it, arose (I conceive) from the fact that the *muscæ volitantes* with which he had been at first troubled appeared in the shape of *horizontal bars.*[1] As to Mr. Mill's difficulty how he could know that the sphere and cube presented to him *were not drawings*, it is answered by the fact that black lines on white paper had been shown to him in a previous experiment. He perceived at once that the outlines of the solid figures had not the same hard clearness, and so pronounced them different from the drawings he had already seen. As to the complete blindness of the patient before the operation, there is no part of Dr. Franz's report more complete and careful. There was in one eye a sensibility to strong light,[1] but none whatever as to form, and this was scientifically ascertained by experiments, because the patient said or fancied he had some such notion. There is no reason to believe that he was informed by those around him that the sphere and cube were tangible objects. On the contrary, every care was taken to extract from him his first visual impressions without any previous hint. The whole case tells therefore as strongly as possible against the theory of the Association School, and shows that there is an original feeling of identity between extension as given by sight, and extension as given by touch.

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[1] I may observe that this statement was made in England, and is not due to an Irishman.

Let me observe, in concluding this part of the discussion, that it is by no means necessary to our side of the question that a blind man should identify particular visual figures with particular series of muscular motions, a thing which Mr. Mill thinks we must prove. Dr. Franz's experiments might be considered conclusive, but I persist that it is unnecessary. Provided we recognise that the extension we see is the same sort of thing as the extension we feel, the Kantian theory is quite justified. It becomes a matter of experience to discover what movements or sensations are required to bring our bodies to a point which we see before us, and in all lengths exceeding a very limited extent, the eye does not tell us exactly how much the muscles of the limbs must do to correspond to it. If the twenty-two yards which a cricketer tries to measure with his eye, from constantly seeing it marked out, were nothing but a visual mark for the exertion of walking the distance, I suppose he would be better able to calculate the distance than he now is. The visual picture always requires verification from the muscles of the limbs, or from an equivalent tape, because it is from the beginning *a different measure.* I have also assumed throughout this discussion that we do obtain extension from touch, an opinion which I now proceed to examine more closely.

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[1] This fact may perhaps have given him the idea of mere extension by sight; but without some definite separations of colour, there could be no forms, and therefore nothing to explain the remarkable identification of eye pictures and muscular feelings.

§ 6. *The Muscular Sense according to the Association School.*—Having shown that the sense of sight is unduly depreciated by my adversaries, I proceed to indicate how the sense of touch has been exalted in proportion, and how functions have been attributed to it beyond the evidence which I can gather from the most careful and oft-repeated observations. The Association School, having styled themselves *psychological* thinkers, have to some extent imposed on the philosophic world a belief, that in empirical observation and experiment at all events they have surpassed those whom they call *a priori* thinkers. The facts I have already laid before the reader will show how far this claim is to be acknowledged without careful testing of their statements. The derivation of space and extension from touch is not accomplished without introducing an additional series of assumptions, which I have been unable to verify, and which I refuse to accept without farther evidence.

(1.) The first notion which they assume is that of *simultaneity*, given as they think by the presence of several sensations at the same moment. I questioned this point in a former work when discussing Platner's celebrated case, in which we are expressly told that if 'objects, and the parts of his body touched by them, did not make different *kinds* of impression on his nerves of sensation, he would take everything external for one and the same.'[1] This remark Mr. Mill himself urges against Hamilton, who thought that even tactual impressions similar in kind were originally given as separate in space. Mr. Mill's exposition of the genesis of extension, starting from the contact of both hands with two small objects, is therefore inconsistent and untenable, unless he could add that the sensations in the two hands are *different in kind.* His reply to me (p. 279, *note*) errs similarly, for it is no answer to my difficulty that we can perceive a sound and a smell at the same moment, as well as separately, and that we are thus given simultaneity. For the sound and the smell would only suggest that two separate sensations could be felt together, not that these sensations coexisted in space. The inference from the simultaneity of sensations *differing in kind*, which cannot give us space, to those *of the same kind*, which can, is by no means obvious, and it was this latter which I thought had not yet been made clear. With no knowledge from sight, I am still doubtful whether separate sensations of touch would not produce, as Mr. Mill and Mr. Bain themselves say (at other times), a *greater volume of sensation*, rather than two simultaneous, but distinguished sensations.

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[1] Mill, p. 277.

At all events, as they acknowledge that it would be so, and as I cannot admit without proof that sensations differing in kind would lead the mind to this discovery, it remains for Mr. Mill to maintain that we may have sensations of the same kind, but differing sufficiently in degree, to suggest to us that they are separate in space, though simultaneous. Thus if the objects touched by the hands when separate (according to his supposition) were hot and cold respectively, or hard and soft respectively, he might argue that these would be given as separate, and not as one confused sensation. It appears to me that even if this point were granted (though I still doubt its correctness), the theory would nevertheless be untenable. For such pairs of sensations *are most decidedly the exception, not the rule.* The great majority of those tactual sensations, whereby we are supposed to learn extension, are very similar in degree as well as in kind; by the very conditions therefore of their favourite association, our adversaries cannot pretend to base an irresistible belief on the evidence of exceptional cases.

(2.) I pass in the next place to the supposition of Mr. Bain, who accounts for the genesis of extension not by the motion of the hand from one object to another touched by the second hand, but (after Brown) by the direction and intensity of the effort made in contracting and extending a muscle or a limb. The objections long since raised against this derivation have not been answered. 'In the first place,' says Mr. Bain, 'this sense of muscular range gives us *lineal* extension.' Had he said, rectilinear, the fact would at once have been denied, for Weber's experiments have shown the great difficulty of producing a right line by extending or contracting the muscles. According to Mr. Bain, it would therefore follow that not a right line, but rather some sort of curve, should be apprehended as the simplest extension in space. Again, the moving limb would not give us length without breadth, and so the surface must come into the mind before the line. These difficulties have been urged long ago, and not fairly met; but there are many more in store for Mr. Bain, and of a kind perhaps better suited to show the weak points in his argument.

It is not officially asserted by Mr. Bain that we have a distinct feeling for each *degree* of contraction of a muscle, by which this condition can be discriminated as such from the proximate degree of contraction. In fact he distinctly 'does not mean to affirm' this.[1] He says, on the contrary, that it is not the muscular state arrived at, but the series of motions required to arrive at it, felt as *series in time*, which gives us extension. According as this series is longer, and requires greater contraction or extension of the limb, we believe the extension to be greater. Let me now entreat the reader's attention.

The two most obvious conditions to make this muscular series in time a standard measure are: (1) a fixed starting-point, and (2) a constant rate of velocity. For example, if the extension of an object placed in the hand is to be measured, as my opponents will have it, by the interruption in the series of feelings produced in closing the hand, then the object will not appear constant in size, unless the contraction starts from a fixed point of feeling, say perfect flatness (openness) of the hand, and unless the contraction is carried on perpetually (or at least for a long time) at a perfectly uniform rate. If the hand be already a little contracted, Mr. Bain has just conceded to us that each degree of contraction is not in itself discriminated, and that therefore we cannot know from whence we start. If the contraction takes place more rapidly, the series *in time* will be shorter, and therefore the extension will appear to vary. Doubtless the reader has already outrun me to my first conclusion, that the two indispensable conditions required by Mr. Bain's theory are not only far from psychologically universal, but are even very exceptionally present. It is not true that we start from any fixed point in the expansion or contraction of our muscles; it is not true that we perform these operations at any fixed rate. A brief observation of the motions of an infant's muscles will convince any fair student, who does not concede the point at first hearing.

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[1] Cf. *Mill*, p. 268.

It may be allowed, in the case of considerable differences, 'that in comparing two different lengths we can feel which is the greater.'[1] But I deny altogether, that unless the very exceptional conditions which Mr. Bain has imposed upon himself (as we have seen) be realised, 'we can also acquire some absolute standard of comparison, through the permanency of impressions sufficiently often repeated.' The fact is that as soon as difficulties arise, he departs even from the true observation he had himself made, that we cannot measure by a distinct feeling the *degree* of contraction, as distinguished from the *series* required to reach it. At the outset it was conceded that there is no distinguishable feeling attached to a limb extended 4, 6, 8, and 10 inches respectively—that this is only known artificially by long experience of the difference in the time required to stretch the distances. How then can we attain an absolute standard? Surely not by the length of the series in time, for that length perpetually varies according as we use more or less energy, or even use the same amount more or less quickly. It must then be by the state of tension arrived at, which we have been already told *cannot be discriminated from the immediately proximate state.*

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[1] *Mill*, p. 269.

Mr. Bain's change of attitude becomes obtrusively marked as his difficulties increase. How does he propose to explain *velocity?* The obvious solution is that it arises from a comparison of space (as given by sight) with the time required to pass through it. If the same space so perceived is passed through first in ten seconds, and then in five, we say the latter motion has a greater velocity. But as Mr. Bain denies himself the assistance of sight, what subterfuge is open to him?

'We must learn,' says he, 'to feel that a slow motion for a long time is the same as a quicker motion with less duration; *which we can easily do by seeing that they both produce the same effect in exhausting the full range of a limb.*' Here then we have the first position completely abandoned. We were told above that the *series*, and not the *state* at the end of the series was the muscular feeling known and discriminated by the mind. Here it is the state at the end of the series which is brought into prominence, and we are told that all methods of reaching it are perceived by the mind to be equivalent. Verily we are trying to catch a real Proteus. But let us play the part of Menelaus, and not relax our hold.

I persist, that we can learn nothing of the kind except we start from the same point consciously, and arrive at the same goal consciously, in our muscular movement. We have already seen that the former position is not sustainable. The latter is equally weak. Is there such a thing as the *full range of a limb*, which we know we cannot exceed? Is it not a common thing for us to employ greater energy, and therefore more velocity, not that we may arrive at this goal, but that we may exceed it? and I suppose it is physiologically true also, that our ordinary full reach may be slightly extended by using greater exertions. But even supposing we had a distinct consciousness of what Mr. Bain calls the 'total sweep' of a limb, no one can deny that it is a condition exceptionally reached, and that if we could not learn the meaning of velocity except in those rare cases *where we started from one extreme and proceeded to the other*, the idea would not be an early and obvious, but a late and precarious acquisition. Nor am I certain that even in these exceptional cases, we should *identify* the two acts, and not rather consider them to be *two different ways* of reaching the same end, seeing that the sensations are very different. It would be like going to a certain place by two different roads.

But I have kept a much stronger objection for the last. *It is not psychologically true that we identify a slow and a quick motion over the same amount of space.* Let the reader verify this by a simple experiment. A blindfolded man, if his hand be passed quickly over a surface, and then slowly over the same surface (say a book or a table) will invariably declare the surface to be different, and that over which he has passed slowly *to be the larger.* In fact any one may verify it by shutting his own eyes, and trying the experiment. The shorter series in time asserts its rights even in the case of full-grown and educated men, in spite of the greater energy employed, and shows clearly that without sight, velocity is not estimated correctly; at all events, Mr.

Bain's derivation errs at every step, and contains a whole nest of psychological assumptions.

(3.) There is but one subject more which must be briefly noticed to make the discussion complete. I have hitherto followed the Association School in keeping out of the controversy as to the muscular motions those performed by the eye, when it desires to comprehend an object of considerable size. This omission is remarkable enough, for when the same philosophers are refuting the possibility of our learning space by simple vision, they insist constantly on the muscular motions of the eyes, their convergence, the sweep of the eye, and so forth. Why do not these particulars appear, when they are trying to account for extension as a series of muscular sensations? Simply because everybody would at once feel the absurdity of setting up a series of minute and hardly felt eye-movements as the measure of extension. These lesser motions of the eyes are almost automatic, and accompanied with so little exertion, that (as I before said) we may include them under simple vision, and allow that the knowledge gained by them does not fall under the scope of the Association theory. It is not necessary that we should claim them, controversially, but I think as a matter of psychological truth the muscular motions which alone can serve Mr. Mill and Mr. Bain are those where we are conscious, of some effort, and of effort lasting through some appreciable time.

I have now gone as fully as I was able through all the objections to the Kantian theory arising from the positive theory which derives Space from Time and muscular feelings; and although my argument is long and intricate, I trust it is clear and cogent enough to convince the reader that the Kantian theory has not been overthrown, and is not likely to be overthrown, by such weapons. To retort a sarcasm of Mr. Mill's: 'his School has referred the doctrine of Kant to the right test. Their objection, if true, is conclusive, *but they are not very particular about the proof of its truth.*[1]

§ 7. *The Necessity of Mathematical Judgments.*—I cannot but think that the arguments by which the Association School seek to explain the peculiar features of mathematical intuitions form the weakest part of their system. But it is absolutely necessary that the philosopher who has accounted for Space as a derived notion should deny the primitive character of the relations of space—especially of geometry; for in the case of arithmetic it would be quite possible to admit Mr. Mill's derivation of space, and yet deny his conclusions concerning numbers. Although arithmetic is, in my opinion, as well as in his, actually learned from space, there can be no doubt that it is possible to learn it from a succession of single sensations of the same kind, as for example, sounds. Time being admitted primitive by the Association School, this, the simplest analysis of its succession, must also be conceded primitive, and thus arithmetic would be traced up to one of the primitive conditions of the mind. It might farther be argued, that all our intuitions of numbers in space are successive acts of apprehension, and that therefore even this aspect of arithmetic could be reduced to a simple analysis of the laws of Time.[1] It is undoubtedly owing to this close relation of Arithmetic to Time, that it is so universally applicable, as compared to geometry. For while the latter only concerns our external intuitions of sight and touch, and their representations in the imagination, the former refers both to these and to the remainder of our intuitions, and even to those inner states of mind which can never possess any form.

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[1] *Mill*, p. 245.

But I leave it to others to develope these views against the Association School; I desire rather to consider arithmetic in close relation with geometry, as the sciences immediately derived from our intuitions of space, especially from our intuitions of sight. We have seen above that the human eye is conscious from the first of an extended field of vision. Such a field necessarily implies boundaries and subdivisions, in other words, figures and units. The laws of these boundaries and subdivisions appear intuitively, up to a certain point of complication, as soon as the field of vision is analysed. Requiring then an act of experience for their development, these laws of space do not require an accumulation of experience for their proof. Being self-evident from an analysis of our external intuition, they depend indeed for their apprehension upon this analysis, and may therefore come distinctly into our consciousness at a late period,[1] or in the case of savages, perhaps never. But for all that as soon as they are apprehended, they are at once perceived as necessary, and as self-evident. This is, as I conceive, the true account of the origin of Mathematic.

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[1] These interesting suggestions are due to my friend Dr. Tarleton.

The Association School give a very different account of the whole matter. They deny both the facts and the inferences of the Kantian School. They consider the supposed necessity of mathematical judgments to be an illusion,[2] arising from the greater mass of evidence we have for such truths, and in consequence from the greater firmness of the associations we form concerning them. They deny that our sense of vision gives us originally distinct intuitions, and confine its province to indicating sensations by which we may anticipate our muscular exertions. They even venture to assert, that the reverse of mathematical truths might be possible, under certain variations of our experience, and one writer has had the rashness to suggest what variations would suffice.[1]

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[1] See above, p. 102.

[2] Mill's *Logic*, i., p. 253.

On many of these points, my opinion has already been stated and vindicated. I have explained what I mean by necessity, and how it applies peculiarly to mathematical judgments. I have discussed the earliest information given by the sense of vision, and have shown that the opposed theory does not embrace the plain facts of the case. But there are two additional points which are brought prominently forward by this special controversy, to which the reader's attention must be directed: first, the assertion, that the alleged necessity of mathematical judgments arises from *a superior degree of empirical evidence;* secondly, that the inconceivability of their reversal is due to the *accident of our evidence being consistent,* and not to the primitive laws of our intuition. Is it true that we have been observing examples of the laws of mathematics from the dawn of consciousness, and that *therefore* we cannot but believe them? Is it true that we could, if we had any starting-point in experience, proceed to imagine them no longer true, but false?

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[1] *Mill on Hamilton,* p. 86.

§ 8. It is assumed by Mr. Mill as self-evident that we are perpetually experiencing exemplifications of the simpler axioms of mathematics. We are constantly presented, he says, with cases of parallel lines not meeting, of two right lines not enclosing a space; of 2 and 2 making 4, and not 5. Hence we associate these facts indissolubly together, and cannot conceive them reversed. In a previous discussion of the subject, I permitted some of these statements to pass unchallenged.[1] But when I found, upon farther reflection, that many psychological assumptions had been made in other parts of the association theory, which implied hasty or inaccurate observation, it appeared desirable to sift afresh the evidence for these statements as to the mathematics of ordinary experience. The following remarks will show that here also the Kantian theory is better supported by the facts, than the theory which professes to be derived from them alone.

It is of course certain that all phenomena given to us as external are subject to the general laws of space, as they are called. It is certain that the outlines of objects and their numbers are exemplifications of these laws, *but surely it is first necessary*

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[1] Their strongest statement is perhaps in Mill's *Logic*, i., p. 261.

that we should attend to these outlines and numbers, by abstracting from other qualities. I do not believe it to be psychologically true, that from our earliest youth we perform this abstraction: I hold on the contrary that we seldom make it, and that when we are taught mathematical figures and their meaning, we do not at first identify them with the outlines or numbers of common objects. As soon as the truth is duly explained to us, I think most men's memory will tell them, that its universal and necessary character rather *flashes upon us suddenly, and we then begin to see* that our experience has all along been exemplifying the truth to us, but that we had not hitherto perceived it. If this be so, it is not upon the evidence of such experience that we believe it, but rather from having been incited, perhaps for the first time, to analyse our intuitions of space, and perceive what they necessarily imply.

If this position appear strange to the student, let him reflect how difficult it is to obtain in every-day experience examples of *simple* mathematical figures, such as, for instance, triangles. Let him also consider that the great majority of the geometrical figures present to our eyes are due to the accident of our architecture, and that in a state of nature, among caves and wigwams, it would be difficult to find such suggestions. We all know that nature's handiwork is often beautifully geometrical, but always with great intricacy and variety, and not like our dull rows of square houses. In fact I feel confident that our experience is not specially adapted to bring out into distinct consciousness, by means of its outlines, a perception of the axioms of geometry, and that the increase of regular outlines, in our civilised condition, has led philosophers to raise what is merely an accident into a law.

But surely, even if the outlines of nature be not such as to suggest *geometrical* axioms, there is ample basis for *arithmetical* truths in our experience. Flocks of sheep, or of birds, where the individuals are very like, must surely have from the first forced the simpler axioms of arithmetic upon us. This would seem at first sight an almost insuperable objection to my position. Happily, however, we are in possession of evidence as to the mental state of primitive men, which throws important light on their knowledge of arithmetic, and shows that even here the facts tend to support Kant's side of the question. It is one of the most obtrusive contrasts between savages and civilised men, that the former have very imperfect notions of numbers. There are many tribes which cannot count beyond 5. Others are puzzled at 8 or at 10.[1] This suggests that their minds are unable to comprehend multiplicity. But when travellers talk in this vague way about them, they suddenly surprise us by the additional fact that they seldom lose oxen, even though they keep them in large herds, and in the case of a Kaffir tribe, intelligent observers[1] add the reason—*that they miss one of the faces which they know*, though they are totally unable to count even a portion of the herd. To such a savage each ox or cow is in some sort a personal friend that he expects to see, and being disappointed, he proceeds to search for it. Here then we have the human mind in a condition able to take in a great multiplicity, and yet unable to perform the abstraction of regarding this multiplicity as a series of units. This is precisely the state of things I should have expected in the primitive state of the human mind; and I think that had mathematical instruction been applied to these savages by a man thoroughly acquainted with their language, and well able to explain himself, they would have very soon *recognised* all the simpler axioms, just like the boy in Plato's Meno, who appears in no way to have been gradually arriving at this sort of knowledge, but rather to have evolved it from a simple analysis of his notions of space, as soon as his attention was directed to the subject.[1]

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[1] For a compendious statement of the evidence see Lubbock's *Origin of Civilisation*, pp. 293-9.

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[1] Cf. Lichtenstein and Galton, quoted in Lubbock, *op. cit.* They add other curious details about their stupidity in understanding bargains by barter, as they were unable to imagine the objects bartered merely as added or subtracted units.

If these inferences from carefully-observed facts be correct, we may doubt the grounds brought forward by the Association School for basing mathematics upon experience, and we may see in the individual learner an analogy to the first discoverer of mathematical demonstration, who gained his point not by gradual observation, and by random groping after special experiences, but by a sudden revelation that he must construct an intuition for his peculiar purpose, and obtain his results by its analysis.[2]

There is yet another difficulty as to the conditions of the Association theory of mathematics which deserves a moment's consideration. It is asserted unanimously by the defenders of this theory that phenomena, in order to be associated inseparably, must be in *immediate* contiguity. I showed in a former work that this was not the case in the supposed inseparable associations between the phenomena of sight and of touch, by which Mr. Bain and Mr. Mill explain our ideas of space and extension. Mr. Mill in reply[1] says that the inseparable association may be created *between two ideas*, and that the phenomena need not have been actual perceptions. But he has completely omitted to show, what on his own principles it was necessary to show, *how the ideas come to be in immediate contiguity*, when the actual perceptions are not so. Until this is shown, the objection is in no wise removed.

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[1] I therefore see grounds to reject such statements as the following: (Mill's *Logic*, i., p. 262), 'Independently of *a priori* evidence, we should certainly believe it with an intensity of conviction far greater than we accord to any physical truth : and this too at a time of life much earlier than that from which we date almost any part of our acquired knowledge, and much too early for our recollection.'

[2] Cf. above, p. 12.

I may also here repeat an additional objection urged in the course of the same discussion, to which Mr. Mill made no reply, and which still appears to me almost fatal to the theory which bases mathematical necessity upon association. Both in his Logic, and in the last edition of his work on Hamilton,[2] the difficulty is raised that experience does not afford us exact lines and circles, and that therefore such a proposition as that concerning a tangent only touching a circle once cannot be proved from empirical evidence. To this Mr. Mill replies that we can obtain it by approximation, in fact from an induction by the method of *concomitant variations*. If the reader will but turn to the description of this kind of induction in Mr. Mill's own *Logic*, he will find it a method of proof by no means obvious, and subject to sundry uncertainties—in any case a very *mediate* sort of proof, and therefore, I contend, completely incapable of producing in us an association of the perfectly obvious and intensely inseparable description required by the facts of the case. I need hardly remark, by the way, how strange it is to find Mr. Mill here again admitting that the figures about which we assert strict mathematical axioms are not real, but merely *ideas*, nor can he here evade the difficulty by asserting *that they exactly resemble the real phenomena.*[1]

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[1] *Mill on Hamilton*, p. 321, *note*.

[2] *Logic*, p. 262, *note*; *Exam. of Hamilton*, p. 323, *note*.

§ 9. It now remains for us to discuss the assertion, that the supposed necessity of mathematical above physical truths is an illusion, and that under supposable circumstances a reversal of them might become equally necessary. I have already considered the value of the assertion that we have a great deal more, and more constant, evidence for mathematical than for physical truths. If my view be correct, there is a great deal more evidence before the mind (in an early stage) that a stone will sink in air or water, than that two right lines cannot enclose a space. The former is a fact which every mind must observe, the latter requires a certain effort of abstraction, which according to our evidence is foreign to savages and to children. But even waiving this point, Mr. Mill has failed to make out his case against the Kantians. The reverse of mathematical truths would be conceivable, says he,[1] '*if our minds were the same, and our experience different.*' He must excuse me if I consider this statement hopelessly ambiguous. For if he includes under experience, the mental conditions of experience, as I think he ought to do, then his statement amounts to this: that if the laws of our intuitive faculty were altered, we might conceive what we now cannot conceive—a statement to which most Kantians would agree. But is it defensible to say in this case that our minds are the same?

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[1] Cf. Mill's *Logic*, i., p. 265.

If on the other hand Mr. Mill merely means, as I think he actually does, the material conditions of experience, then he is bound to show what alteration in these conditions would enable us to conceive such a thing as $2 + 2 = 5$. And this he did attempt, in a quotation from a 'barrister,' but as it turned out, very unsuccessfully. The barrister thought that a man who knew nothing but round objects, and was placed on a fixed point between two railway lines, would on inspection believe that parallel straight lines meet when produced. He also thought that in a world where a fifth unit was always created when two were added to two, men would come to believe necessarily that $2 + 2 = 5$.[2]

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[1] *Mill on Hamilton*, p. 84. This point was suggested to me by Mr. Monck.

[2] Mill, p. 86, *note*.

I showed that in the first case the barrister had assumed that the fixed man *knew the railway lines to be straight*, and that in the second case the writer had confused the units themselves with the act of adding them. However the act of adding two and two might produce five, these particular units would still remain four out of the five, with an additional unit created by the act. But I need not dilate on my refutation, as Mr. Mill in his last Edition declined to defend the barrister, adding that he quoted the passage not as an argument, but as an illustration.

As I have shown just now, this is not a logical reply. Until Mr. Mill is able to show by some reasonable hypothesis that a change of our material experience might produce a reversal of mathematical axioms, he is not entitled to assert what is contrary to all the evidence we possess on the subject. The attempt of the barrister was therefore a distinct argument in favour of the Association Theory, and an argument which has been refuted.

I had attacked the theory from another side, and received from Mr. Mill a curt reply which cannot be left unnoticed. In arguing that the necessity of mathematical truths was derived from consistent experience, he had said:[1] 'had but experience afforded a case of illusion,' in which these truths appeared to be reversed, the counter-association formed might have been sufficient to defeat the supposed necessity of thought. In other words, had we but the least starting point, to help our imaginations in doing it, we could have conceived the reverse of $2+2=4$, or of a straight line being the shortest between two points. This statement I naturally enough took up, and showed that in our everyday life there were such things as double vision of an object single to the touch, and a straight stick appearing bent in water. I argued that on Mr. Mill's showing these natural phenomena should have been sufficient to 'defeat the supposed necessity,' and that still they were not so. 'As a protection,' says Mr. Mill, 'against future irrelevancies of this kind, I have inserted in the text the word *persistent* before illusion. Mr. Mahaffy argues as if the illusions in our experience never got corrected by contrary experience, but would permanently deceive us unless over-ridden by an *a priori* conviction.' I never did any such thing; I simply took up Mr. Mill's statement as I found it, and showed it to be inconclusive.[1]

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[1] Pp. 324-5 (in the wording of the earlier Editions).

But now my adversary completely changes his ground; he no longer maintains the proposition I above refuted, but this very different one, that if we had a persistent illusion to the contrary, we could conceive mathematical truths not necessary. What does he mean by a *persistent illusion?* If he means *one which we cannot banish,* which perpetually recurs, even after we know it to be inaccurate, then his remark is in itself reasonable, but does not answer my instances, for they are strictly persistent in this sense. We can produce them at any moment, we can make them last as long as we like. To take a similar instance: we are perfectly able to conceive the earth fixed, and the sun rising and setting literally, even though we have immediate access to the evidence which disproves these conceptions; because they are persistent, although disproved. The illusion and the proof are here respectively stronger and weaker than in the case of double vision in the crooked stick, but yet they differ from that case only in degree. If we can hardly shake off the former illusion, we should surely, on Mr. Mill's principles at least, be able to suppose the truth of the latter. For they are in a reasonable sense persistent illusions.

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[1] I did not mean to maintain that mankind had reason to *believe* that $1=2$, or that a bent line was the shortest way between two points; but merely that on Mr. Mill's own showing we had a sufficient amount of experience to enable us to *conceive* it.

But as in this sense the reply is totally beside the point, it is probable that Mr. Mill means by *persistent, one which we cannot disprove,* and indeed he reverts in the context to the unfortunate barrister's instance, of the fixed man on the railway lines, and his notion as to parallel lines meeting. In this sense, the reader will at once see that the whole point of Mr. Mill's remark has vanished. He now states nothing more than this, that if the constitution of nature were different, we might have different beliefs. This brings us round to the old standpoint which we have already disposed of, where Mr. Mill speaks of our minds remaining the same and our experience being different. Having discovered our old friend under his new disguise, I may refer the reader to the earlier part of this discussion,[1] and conclude by observing that my objection, instead of being irrelevant, has forced my adversary from a new and advanced position back upon the old ground, which he himself confesses has been under heavier fire than any other part of his book.

If then the philosophers who derive our notions of Space and Extension from mere experience are duly questioned, we find them assuming before proof a new meaning for extension, then depreciating the plain facts of vision, and exaggerating those of touch in order to sustain this meaning. We find them setting up imaginary and exceptional cases, as if they were universal and obvious, and basing indissoluble associations on these cases. Until these defects are removed, we may still adhere with confidence to the theory of Kant.

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[1] Above, p. 156.

PART II.

THE DEDUCTION AND SCHEMATISM OF THE CATEGORIES.

ADDITIONAL PREFACE

(TO PART II.)

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Like most Authors, I find myself unable to publish at the rate I originally proposed. As, however, additional parts of this work had been promised, I thought it better to publish even this short instalment, as an earnest of my intentions. The first volume will only be completed with the appearance of a third part, which I hope to publish when the turmoil and fever of politics allow us some rest.

The great importance and difficulty of the subjects treated in these chapters make its shortness less objectionable. For I have here taken up, and honestly grappled with, the great crux of Kant's system, his Deduction of the Categories. Many of my intelligent critics said fairly enough that the former parts of the book were not sufficient to test my pretensions as a Commentator. They said that many previous critics had grasped the Aesthetic, but that the Analytic would prove the real test of any book professing to explain and simplify Kant. I have met this challenge by the present publication, in which I claim to have given a clear and consistent account of the Deduction and Schematism of the Categories, and to have left unexplained not more than two or three sentences, with an open confession of my perplexity; sentences, too, which do not in the least affect the general argument.

But though it claims to be clear and consistent, this Commentary is not, and cannot be, either easy or short. It is not easy, because the subject is not easy, and deals with notions exceedingly abstract, and only familiar to those who have made mental science a subject of special study. To such this book will be clear and readable enough, while those impatient young gentlemen, who skim through philosophical systems for examination or reviewing purposes, will find it tedious and perhaps useless. It is not short, because Kant's book, if worth reading at all, is worth reading and knowing accurately, and no pains are misplaced, if they result in a full and comprehensive grasp of the greatest metaphysical system the world has yet seen. I have therefore compared editions, and noted objections very deliberately, endeavouring to shirk no difficulty, and expressing a distinct opinion, whether right or wrong, on every disputed point.

Some errors of translation, which were pointed out by critics, I have corrected in the next page.

CORRIGENDA IN VOL. III.

The following corrections are partly due to Mr. Sidgwick's review of Vol. III., No. 56, in the Academy:—

Page 23, note, *for* from the Critick, *read* into the 2nd Ed. of the Critick.
—— 27, last line, *read* the corresponding intuition contains.
—— 39, line 23, *the sense is* not escaping suspicion because true.
—— 85, foot, *for* so far *read* so far as.
—— 115, line 6 sqq., *read* 'Metaphysic, that is the occupation of Reason with itself, and the supposed knowledge of objects arising immediately from this incubation of its own concepts, without requiring, or indeed being able to reach that knowledge through, experience.'
—— 129, *perhaps* regularity *should be* legitimacy.
—— 150, line 4, *for* intuition *read* intention [end].
—— 155, line 1, *insert* not *after* does.
—— 198, line 4, *for* unities *read* units.
—— 199, line 30, *read* means of the aforesaid predicates of a triangle.
—— 201, line 16, *read* so far as they can come together in our experience.
—— 212, line 15, *for* a *read* one.

The following are due to a manuscript review by Professor Selss, to be shortly published in *Hermathena*:—

Page 27, line 12, *for* come into use *read* been exercised.
—— 40, line 12, *omit* this.
—— 155, line 15, *for* our intercourse *read* of evasion.
—— 200, line 30, *for* It *read* There.
—— 220, line 16, *read* The Categories are here so peculiarly circumstanced.
—— 235, line 10, *for* their *read* its.
—— 241, line 7, *for* is based on *read* aims at.

CHAPTER V.

INTRODUCTION TO THE TRANSCENDENTAL ANALYTIC.

* BEFORE entering on a new division of Kant's Critick, a few general remarks will not be out of place. The Analytic affords the reader a far longer and more weary task than the Aesthetic. The latter is perhaps too compressed, owing (I suppose) to Kant's earlier discussions having to a great extent forestalled it. At all events, there is hardly any repetition, or enforcing of the same truth in slightly varied language, when Kant discusses the basis of Mathematic. The Analytic, on the contrary, just thought out by the great philosopher, is born, if I may so say, with the pangs of labour. We see Kant wrestling with his utterance to put it clearly before the world. As might have been expected, such a discussion defeated its own end. Repetitions and explanations weary and confuse us, when they are carried beyond reasonable limits. And so Kant labours again and again at the Deduction or justification of his Categories, in the first Edition, then in the Prolegomena, then in his second Edition, and yet his first exposition, though not the most complete, is by far

the clearest he has given. The difficulties, however, of any of them seem quite sufficient for most English philosophers. A few have made bold to discuss and comment on the Aesthetic, or its doctrines. But as soon as we approach the Analytic, we find little to help us, but either servile repetition or silence. In truth, the duty of a commentator on this part of Kant's Critick is not merely to paraphrase, or to expand. If he would have his author receive full justice, he must, above all things, abbreviate. He must bring together Kant's varied reassertions of the same fact, and reproduce them in a single, but complete form. This will be the plan of the Commentary now offered on the Deduction of the Categories, and therefore the practice of adhering to the paragraphs of the original will be sometimes advisedly abandoned.

The division on which we now enter is the second part of the Transcendental Stoicheiology, viz., *transcendental Logic.* Kant's Introduction is naturally devoted to the accurate definition of this expression, which is not in itself obvious.

I. *Of Logic Generally.*—'Our knowledge springs from two sources within us. The first is the faculty of receiving impressions (*sensibility*), the second, that of knowing objects by means of these impressions—or the faculty of producing concepts (*understanding*). By means of the former an object is given to us; by the latter the object is *thought*, in relation to this given representation, as a mere determination of our minds.' The distinction of *pure* (*a priori*) and *empirical* (*a posteriori*), already applied[1] to intuitions, holds good of concepts also. As the pure intuition contains the mere form, in which something is intuited, so the pure concept contains the mere form in which we think an object generally. This receptivity of impressions and this spontaneity of our understanding are both essential to knowledge. Though perfectly distinct in their nature, they combine in their action, and there is no ground for preferring one to the other. No object can be given without sensibility, no object can be thought without understanding. Taken by themselves, concepts without intuitions are *vacua*, intuitions without concepts *cæca*. 'It is, therefore, as necessary to make our concepts sensuous, as to make our intuitions understandible, or bring them under concepts. For the understanding can intuite nothing, and the senses can think nothing, they cannot exchange duties; we can only have knowledge, or cognition, by combining them. *But this affords no reason for confusing their respective contributions*, which we should rather carefully distinguish and separate. We have done so under the titles *Aesthetic* and *Logic*.'

* It has been a common objection to Kant, urged among others by Mr. Lewes and by Edmund Montgomery, that Kant separated faculties which are

never separate in nature. The previous paragraph shows, I think, that they have not done justice to Kant. He knew, as well as they, that sensibility and understanding cannot be severed in use. He even shows, what he claims as an original psychological observation, that, in our ordinary perceptions the understanding is necessary, acting through the imagination.[1] But if scientific analysis means anything, it means the separate consideration of the fused elements given in our ordinary experience. I cannot forbear to add, that whatever mistakes in theory Kant may have made, his psychological observation was far too subtile to allow any obvious fact to escape his notice; any objection founded on such grounds can generally be straightway refuted from his own express statements.

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[1] Above, pp. 35-6.

We may approach Logic with two different objects; either to ascertain the rules of our understanding, which are absolutely necessary for using it in any way whatever, or to ascertain those which guide its use when applied to a particular class of objects. The latter is called the *organon* (or logic) of this or that science. In the schools it is generally supposed to be a preliminary to the study of a science; in reality it is the very last question settled in each science. We must know the objects very well, before we can state the rules which make a science of them possible. Thus, for example, while mathematical studies are in a very advanced condition, what is called the *Logic* of Mathematic is still in obscurity. The first notions necessary for a sound method in Geometry, in the Differential Calculus, or in Mechanics, still divide the minds of competent inquirers.

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[1] Cf. Vol. iii. p. 211, note.

Turning back then to the former—general Logic, which makes no distinction as to objects—even this Logic may be applied Logic, as well as pure. For *pure general* Logic must abstract from all empirical conditions, not only external but internal. It must exclude the influences of the senses, the play of imagination, the laws of memory, and all those sources of particular prejudices, which only affect us in particular cases. It merely contains a *canon of the understanding and reason*, as regards the formal elements in their use. So far the matter is plain enough. But how can a general Logic be *applied*, for this seems to imply particular objects? There is one set of conditions, which, though empirical, yet apply to all mankind. These are the psychological conditions that may hinder or advance reasoning. Logic can be general, and yet include a consideration of these, viz., attention and its consequences, the causes of error, the conditions of doubt, of conviction, and such like. For these, though individually contingent, are, as a whole, necessary for any concrete use of the understanding. This is the only sense in which Kant admits the term applied Logic, as a *kathartikon*, or purifier, of common sense. It bears the same relation to pure general Logic that moral teaching, or practical Ethic bears to pure Morals, a science which contains nothing but the necessary moral laws of a free will, while practical Ethic discusses the difficulties and hindrances with which men must contend in carrying out these laws.

It is necessary for logicians to sever most carefully the pure from the applied (though still general) side of Logic. The former alone is strict science. They should keep before them two rules; (1), Pure Logic abstracts from all content whatever in our knowledge; (2), as being pure it possesses no empirical principles, more especially it must borrow nothing from empirical Psychology. In a demonstrative science everything must be certain *a priori*.

II. *Of Transcendental Logic.*—We spoke above of the Logic of a particular use of the understanding. When this particular use is determined by a special class of objects (or special science), its Logic becomes the *organon* of that science. But the particular use may be determined not by the *object*, but by the special *procedure* of the understanding. As there are not only empirical but pure intuitions, so there may be a similar distinction between empirical and pure thinking. We might then have a Logic which did not abstract from all the content or matter of knowledge. For though the analysis of the pure thinking of objects must (1) exclude all cognitions of empirical content, in order to be general, it may (2) discuss the origin of our knowledge, when pure—a subject quite beyond the range of general pure Logic, which must take the facts as it finds them, and in no way concerns itself about their origin, but only about the way in which the understanding connects them.

Kant here inserts a remark of great importance. The term *transcendental* is not applied in the Critick to every *a priori* cognition, but only to such as inform us, that certain representations (intuitions or concepts) are applied altogether *a priori*, how they are so applied, or that they are possible *a priori*, and how so. For example, space or any of its geometrical figures is no transcendental representation, but the knowledge that it is *a priori*, and the possibility of its applying, though *a priori*, to the objects of the senses, this may be called *transcendental*. The contrast of empirical and transcendental concerns a distinction *in our cognitions, and not their relations to their objects.*

Let us assume that there are concepts referring *a priori* to objects, as we found intuitions so doing. These concepts being mere acts of pure thinking, neither empirical nor aesthetical in origin, suggest to us the notion of a peculiar science, the science of that cognition by which we think objects com pletely *a priori*. Such a science determining the origin, sphere, and objective validity of such cognitions, may be called *transcendental Logic*, being concerned with the laws of understanding and reason only, and with these only so far as they apply to objects *a priori*.

III. *The Division of General Logic into Analytic and Dialectic.*—The celebrated old question by which men thought either to puzzle logicians, or make them confess their ignorance, was this: *What is truth?* The definition of the term—the agreement of cognition with its object—is here pre-supposed; what we demand is the universal and safe criterion of the truth of each single cognition. *Prudens interrogatio dimidium scientiae.* A silly question may not only disgrace the interrogator, but mislead the incautious respondent into silly answers, and so (according to an old proverb) while one milks the he-goat, the other holds the sieve for him.

If truth means the agreement of a cognition with its object, it is implied that this object is distinguished from all others, for the cognition, whatever other agreements it may contain, is only true if it correspond to its particular object. Now an universal criterion of truth must be valid for all cognitions, without distinguishing their objects. As therefore such a criterion must abstract from all content of knowledge, and is at the same time to concern this very content, to demand it is absurd and self-contradictory. An universal, as well as sufficient mark of such truth cannot be found. As the content is called the matter of knowledge, our result may be stated thus: 'No universal criterion of the truth of our cognition as to its *matter* can be required, because such a criterion is self-contradictory.'[1]

As regards mere *form*, the science of Logic, in expounding the universal and necessary rules of the understanding, must evidently present us in these rules criteria of truth. Whatever contradicts them must be false, or the understanding would be in conflict with its own general laws. But these criteria are insufficient, as they only affect the form of truth. For a cognition might fully satisfy the logical form, that is, not be self-contradictory, and yet contradict the object. The mere logical condition of truth, or agreement of a cognition with the universal and formal laws of understanding and reason, is then the *sine qua non*, or negative condition of all truth: but logic can do no more, and is powerless to detect the errors which affect not form, but content.

General logic analyses all the formal operations of understanding and reason, and determines the principles of all logical estimating of our knowledge. 'This part then may be called *Analytic*, and is the negative touchstone of truth, whose rules must be thoroughly satisfied before we examine our knowledge as to matter, to see whether they contain positive truth as regards the object.'[1] But as the mere form of knowledge, however perfect, is quite insufficient to guarantee the material (objective) truth of knowledge, no man can venture to assert from Logic anything about objects, without obtaining farther information. He may then attempt to use or combine his materials according to logical laws, or better still, merely to test them in this way. But the act of giving all our cognitions the form of understanding, however indigent we may be as regards their matter, is so seductive, that general logic, which is a mere *canon* for testing, has been used (and accordingly abused) as an *organon* for producing, or apparently producing, objective assertions. General logic, when it claims to be an organon, is called *Dialectic.*

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[1] Cf. Mansel, *Proleg. Logica*, p. 189–90.

However the ancients may have varied in their acceptation of this term, they practically used it as the *Logic of illusion.* They applied the accurate method of logic sophistically to give their ignorance, or even their deliberate fallacies the appearance of truth. But we may lay it to heart as a safe and useful caution: that universal Logic, *considered as an organon*, is always dialectical, or a logic of illusion. The pretence, therefore, of using it as an instrument (organon) to extend, even apparently, our knowledge, turns out mere idle talk. Such a proceeding is totally unworthy of philosophy. Dialectic has therefore been included in Logic as the *Critick of dialectical illusion*, and as such we shall here use it.

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[1] I am persuaded that Mr. Meiklejohn has seen the true sense of this sentence, in which the pronouns are very confused. I have followed his version, which is not the obvious one.

IV. *The Division of Transcendental Logic into Transcendental Analytic and Transcendental Dialectic.* In transcendental Logic we isolate the understanding (as we isolated the sensibility in the transcendental Aesthetic) and select from our knowledge that part of thinking which has its origin in the understanding. But we cannot use this pure cognition except objects be given us in intuition—a necessary condition, without which cognition is void. The part of transcendental Logic, then, which expounds the elements of pure rational cognition, and the principles without which nothing can be thought, is called Transcendental Analytic, and is a Logic of Truth. But though experience alone provides us with the matter to which these pure concepts of the understanding can be applied, there is the strongest temptation to use them by themselves, and beyond the limits of experience. Hence the understanding is in danger of making a material use of its formal principles, and of judging about objects which are not, and perhaps even cannot be, given. Thus a mere canon for controlling the empirical use of the understanding, is misapplied into an *organon* of universal and unlimited use, and the understanding ventures without farther aid to assert and decide *synthetically* about objects in general. The second part of our transcendental Logic must therefore criticise this dialectical illusion and is called transcendental Dialectic—not in the sense of the art of producing such illusion, but—as the Critick of the Understanding and Reason in their hyperphysical employments, which exposes the illusion of their false pretensions, and reduces their claim of discovering and extending knowledge by purely transcendental principles to a mere protecting the understanding from sophistical illusions.

CHAPTER VI.

TRANSCENDENTAL LOGIC. PART I.

The Transcendental Analytic.—This Analytic is the resolution of our whole *a priori* cognition into its component elements. It requires the following conditions:—(1) the concepts must be pure; (2) they must belong, not to sensibility, but to thought and understanding; (3) they must be elementary concepts, well distinguished from those deduced from them, or composite; (4) the list must be complete. This last quality cannot be obtained by a mere aggregate of observations. We must start from a notion of *a priori* cognition *as a whole*, and subdivide it into the concepts belonging to it, which are then *connected systematically*. The pure understanding, apart from all that is empirical, and even from all sensibility, is an independent self-contained unity, not to be enlarged by additions from without. Hence the sum total of its cognition forms a system falling under one idea, and the completeness and perfect articulation of this system will be a touchstone to test the claims of all cognitions that belong to it. The Analytic is divided, on the model of ordinary Logic, into two books, of which the first contains the *concepts*, the second the fundamental *judgments* [or Principles, *Grundsätze*] of the pure understanding.

TRANSCENDENTAL ANALYTIC, BOOK I.

The Analytic of Concepts.—Kant does not mean by this term the ordinary analysis of concepts, in order to make them clear and distinct, but rather the analysis of the faculty of understanding itself, a task seldom attempted. For we shall endeavour to ascertain the possibility of *a priori* concepts by seeking them in the understanding alone as their place of birth, and analysing its pure use; this is the proper business of transcendental philosophy. These pure concepts lie prepared in their forms and dispositions in the human understanding, until they develop by occasion of experience, and may then be found in the same understanding, freed of the empirical conditions that attach to them.

ANALYTIC OF CONCEPTS [CHAPTER I.].

Of the Clue to discover all pure Concepts of the Understanding.—If we bring any of our cognitive faculties into action, in due time sundry notions present themselves, which make this faculty known to us, and which can be collected more or less completely, according to the number or acuteness of our observations. But we can never make sure that our task is completed; and moreover the concepts attained in this accidental way come in no order or systematic unity, nor can they attain these qualities by being ranked according to their greater or less comprehension, however methodical this arrangement may be.

Transcendental philosophy has the advantage, and is also under the obligation, of seeking its concepts on a fixed principle, as they spring pure and unmixed from the understanding as an absolute unity, and must therefore be connected according to some one notion. This connexion must afford a rule, according to which every pure concept may be ranked, and the completeness of the list fully determined *a priori*.

* It appears manifest from these introductory remarks that the common charge made against Kant, of having picked up his Categories empirically, and without proper reduction, can only be true in one sense. He may have blundered in the carrying out of his idea—a question which cannot be discussed as yet—but he certainly did not intend to proceed empirically, nay, he even professedly repudiated the error attributed to him by his critics. His mistake then, if he really made it, was not a mistake in principle, but a mistake in psychological insight—an inability to see how several of his separate heads might really be reduced to one. I cannot but repeat

that such a fault is not likely to occur in a great master thinker, and that if his starting point be right, as his critics must confess (according to their own statements, which coincide with his), he is less likely than they to have committed an error from want of acuteness. But of this anon.

*We now come to the first really difficult discussion in the Critick. The Aesthetic, however the commentators may have blundered in details, has been, as a whole, comprehended even by English philosophers, and has had its full and fair effect on philosophical thought, ever since Kant's days. But with the exception of Hegel, whose system implies a profound knowledge of Kant's transcendental Logic, it would be difficult to find any philosopher who had fully utilised Kant's teaching in this part of his work. The later commentaries are indeed progressing towards a fuller knowledge. That of Kuno Fischer, for example, following the lead of Schopenhauer, is tolerably clear and precise on the difficult Deduction of the Categories, so far as it was expounded in the first Edition, though he shirks all comparison with the changes in the later Editions. But even Kuno Fischer settles the hard question before us, the passage from the ordinary table of logical judgments to that of the Categories, in a single short paragraph, omitting all mention of Kant's close analysis of the *function* of thought, and the *functions of unity* produced among phenomena of the understanding.

We can here obtain no help but from the author himself, and must seek from a careful analysis of his argument and from the short explanations in his Prolegomena to develop his meaning.

THE TRANSCENDENTAL CLUE TO DISCOVER ALL THE PURE CONCEPTS OF THE UNDERSTANDING. [SECTION I.]

Of the logical Use of the Understanding generally.—We know already that our understanding has no faculty of intuition. As there is no other way of cognising except through concepts, the understanding must cognise through them, but discursively, as opposed to intuitive cognition. All intuitions are affections of sense, all concepts functions of the understanding. By Function Kant means 'the unity of action in ranging various representations under a higher one.' So the understanding is *spontaneous* in forming its concepts, not receptive of impressions, like the sensibility. What we here desire to ascertain is the exact number of the primitive functions of the understanding, that is, of its various *a priori* unities of action, or ways of ordering its representation under higher notions. How does Kant set about to do this? In the first place, suppose we have the concept ready, how can we make use of it? It is confessed, that no concept refers directly to objects. Intuitions alone are immediate representations of objects, for we still hold, in spite of Sir Wm.

Hamilton and other Scotchmen, that external objects (in the common sense) are not presented to the mind, but represented by intuitions, or modifications of our sensibility. Therefore we regard both intuitions and concepts as representations, but the former as immediate, the latter as mediate; and when the concept refers to objects through the intuition, it produces in us the representation of an (immediate) representation. But as we cannot use concepts to intuite objects through them, there is no use left for them except that we should *judge* objects by means of them. For in a judgment we can bring an intuition (as subject) under a concept (as predicate), and so we indirectly cognise an object through our concept. We may repeat the process, making a lesser concept the subject, and bringing it under a greater, as predicate. For example, in the judgment *all bodies are divisible*, both terms are concepts, but we have previously brought many intuitions under the former, by judging: *this is a body*, and *that is a body*. But then we bring the concept *body* under a higher concept of *divisibility*, which applies to other concepts also. Judging, therefore, consists in bringing many intuitions, or many lower concepts, under one higher concept, which embraces the many. Hence judgments are called by Kant *functions of unity*, that is to say, functions producing unity, in our cognitions. But, if concepts can only be used in judgments, then the understanding has no action apart from judging; it may, in fact, be called *the faculty of judging.* For what is *thinking* (as opposed to intuition) but cognising through concepts? Whenever we do this, we regard the concept as the predicate of a judgment, in which we assert that another representation comes under it. Every concept, therefore, as it must contain many representations, so it must be also regarded as the predicate of many possible judgments. If therefore all the acts of the understanding can be classed as judgments, and if concepts can only be used in judgments, it is obvious that an analysis of the various kinds of judgments will be the clue to discover the various kinds of concepts. In Kant's language, the functions of unity in judgments, if they can be reduced to fixed classes, will discover to us all the functions of the understanding.

* I think I have left no difficulty unresolved in the above paragraph, except the definition of the word *Function*, which Kant says is 'The unity of the act (die Einheit der Handlung) of ranging diverse representations under a common one.' The reader must not confuse this with what Kant calls *functions of unity*, which are evidently functions producing unity, as is clear from his exposition of judgments, which he describes in these words. I had once thought of suggesting a slight emendation (der Einheit die Handlung), so that the passage would run thus: 'I mean by function of unity, the act of

ranging, &c.' This would evade the difficulty, and give a true and easy sense. But the recurrence of the words, 'the unity of the act of combining, &c.,' in at least three other places in the Critick, is decisive against this solution of the difficulty.

These are the passages (p. 85, Ed. Bohn): 'I cannot know a line, or anything else in space, without *drawing it*, and so producing a certain combination of various elements synthetically, so that the *unity of this act* is at the same time the unity of consciousness (in the notion of a line), and so alone can an object in space be cognised.' He accordingly says, in a very decisive passage (p. 80, Ed. Bohn), when talking of synthesis, as a spontaneous combination of variety by the understanding: 'You here perceive easily, that this action is originally one [*einig*] and equally valid for all combination.'[1]

* The third is a passage expounding the very same subject as we are now treating, and is a sort of appendix to the Aesthetic thrust into the Deduction of the Categories in the Second Edition.[2] He is speaking of the action of the understanding on the materials supplied by intuition, and says, 'the

synthesis [of the understanding], considered separately, is nothing but the unity of the [act or] action, of which, as such, the understanding is conscious, even without sensibility, but by which it determines even the sensibility,' &c. He proceeds in the next paragraph to illustrate his meaning by the very example adduced in the previous passage, adding several other similar ones.

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[1] This sentence is completely ruined in Mr. Meiklejohn's translation, who strangely substitutes the following: 'The reader will easily enough perceive that the possibility of the conjunction must be grounded in the very nature of this act,' &c. ! !

[2] Latter part of §§ 24 and 25, or §§ 20 and 21, Ed. Bohn.

It will thus appear that Kant declares no object can be considered by the mind as such, till its parts or qualities have been brought together by a spontaneous act of the mind, and that though the various parts must be gathered successively, there is an unity in this act in every case, and this is really the unity attributed to the object. A slight variation in expression will be found in the corresponding passage of the First Edition to that last quoted.[1] He there speaks of the *identity* of the function, and even of the *identity* of the act, which subjects intuited impressions to an *a priori* unity. There is good reason to speak of the identity of the function, for it is in every case a synthesis of variety; but I think Kant wisely changed his expression in the Second Edition, and spoke of the unity of the act, for though the various Categories are indeed phases of the same identical function of synthesis, yet the acts of unifying multiplicity in each can hardly be called identical. And so, in the Second Edition, in the close of the passage we have been expounding, he says that an analysis of judgments will disclose to us the Functions of the understanding; that is to say, the phases of that higher function, which is identical in all consciousness, and consists simply in making all representations *our own*, or modifications of an identical self. The action of the understanding in the case of each Category is identical, for each Category is *one way* of producing unity in our representations. The action of the understanding in all the Categories together is *one kind* of action, and so far one, though it may vary in the detail of each Category.

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[1] Cf. Vol. iii., p. 201.

THE CLUE TO DISCOVER ALL PURE CONCEPTS OF THE UNDERSTANDING [SECTION II.]

§ 9.[1] *Of the Logical Function of the Understanding in Judgments.*—If we abstract from all content, and apply ourselves to the mere form of judgments, we find that the function of thought in them can be brought under four heads, each of which contains three phases [Momente]. Here is the table:

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[1] This numbering of paragraphs continued (after a long suspension), from p. 73 above, is used by Kant down to the end of the Deduction, merely for the convenience of reference, and has nothing to say to the divisions and subdivisions of chapters and sections in which he luxuriates. I have preserved it for the same reason. Mr. Meiklejohn has unwarrantably changed it, and so confused some of Kant's references. He has inserted §§ 1-4 in the earlier part of the Analytic, where Kant does not use them, and so finds himself at § 5, where Kant resumes with § 9. The reader who refers to his translation will note this, as I shall refer to Kant's paragraphing, even when I give the pages according to the English translation.

1. Quantity of Judgments.	2. Quality.
Universal.	Affirmative.
Particular.	Negative.
Singular.	Infinite.
3. Relation.	4. Modality.
Categorical.	Problematical.
Hypothetical.	Assertative.
Disjunctive.	Apodictical.

Some remarks on this table are necessary.

1. Logicians say justly, that singular judgments can be treated as universals in syllogisms, for the whole subject is affirmed of the predicate. But in their quantity, as cognitions, they differ as unity does from infinity, and are therefore materially distinct. Hence the *judicium singulare*, as a mere cognition, compared in quantity with other cognitions, must have a separate place in a complete table of the phases of thinking.

2. Similarly in transcendental Logic, infinite judgments must be distinguished from affirmative, which is contrary to the practice of general Logic. The latter abstracts wholly from the content of the

predicate, and merely examines whether it is affirmed or denied of the subject. But the former is concerned about the value of this affirmation by means of a negative predicate, and what our cognition can gain by it. If I say *the soul is not mortal*, this judgment, regarded as negative, at least guards against an error. Regarded as affirmative (not-mortal), it divides all the universe into mortal and immortal things, and excluding the mortal, includes the soul in the infinite number of non-mortal things. Many other parts might in like manner be abstracted, without in the least increasing or determining our notion of the soul. These infinite judgments then, as regards logical comprehension, are really limitative of the general content of a cognition, and must not be passed over in our transcendental table, as this function of the understanding may be important in the field of pure *a priori* cognition.

3. All the relations of thinking in judgments are either (α) that of predicate to subject, (β) that of antecedent to consequent, (γ) that of a divided cognition to its combined members. In the first kind two concepts, in the second two judgments, in the third several judgments are considered in relation to each other. This is obvious in the first and second cases. The relation of the various parts in a disjunctive judgment is not only one of opposition, in that they are mutually exclusive, but also of community, in that they jointly make up the

sphere of the cognition concerned. Each then completes the rest. For example, 'the world exists either through blind chance, or through internal necessity, or through an external cause.' Each of these judgments embraces a portion of the sphere of our possible knowledge about the world's existence: taken together they express the whole of this sphere. Remove one and you posit the rest, and *vice versa.* There is then this community in these judgments, that though mutually exclusive, they make up, when combined, the whole content of one given cognition.

4. The Modality of judgments is a peculiar function, in that it adds nothing to their content, but only affects the value of the copula in relation to our thinking. Problematical judgments are those in which the affirmation or negation is only considered *possible*, or optional. In assertative, it is considered *real*, or true; in apodictical, *necessary.* Thus in a hypothetical judgment, both antecedent and consequent are optional, and only the consequence is assertative. Whether you assume them true or not, the consequence is real. So the various judgments contained in a disjunctive judgment are problematical, and may be merely assumed for a moment, to lead the mind towards the true solution. The assertative judgment asserts logical reality or truth, as for example, in a hypothetical syllogism the antecedent which has occurred prob-

lematically in the major premiss, is repeated assertatively in the minor, and shows that the proposition is no longer optional, but connected with our understanding according to its laws. The apodictical judgment considers the assertion as determined by these laws of the understanding, and, therefore as making its assertion *a priori*, or necessarily. As these various stages are reached gradually, the mind proceeding from an assertion first to its truth, and then to its necessity, the three functions of modality may be counted as distinct phases of thought.

THE CLUE TO DISCOVER ALL THE PURE CONCEPTS OF THE UNDERSTANDING [SECTION III.].

§ 10. *On the Pure Concepts of the Understanding, or Categories.*—*We now come to the second serious difficulty in the Analytic, which has not yet been adequately explained. Even Kuno Fischer's professed Commentary quietly ignores all the argument in this paragraph, and contents itself with the stating the result[1]. As Kant's own exposition has not penetrated the minds of his readers, it seems advisable to abandon paraphrasing, and to state the argument in an independent form.

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[1] Cf. my translation, pp. 71, sqq. I had there endeavoured to supply the omission in a note, which I found too brief and compressed, when I came to lecture on the subject to younger students. I therefore now give a fuller and I hope a more satisfactory explanation.

* We saw above (p. 178) that the function of the understanding was simply to gather up objects, or lesser concepts, under higher notions—in fact to produce unity in our knowledge; and we saw that this was done by acts of judging, which compared the lesser notion with the greater, and either reduced it under this notion, or referred it to some notion, to be otherwise determined. But an analysis of judgments was a task long since accomplished by logicians, and from this analysis it appears that our judgments, or acts of producing unity among our representations, must assume, and can only assume, one of the forms laid down in the logical table of judgments. This fact points to an original feature in the constitution of our understanding, and indicates that our power of combining variety is confined to these forms, or to something corresponding to these forms.

* Now let us consider that all the subjects of our earliest judgments are not concepts, but intuitions of objects. We cannot in fact have a general concept till we have formed it by means of a number of such judgments. Nevertheless, from the very outset our judgments must have taken the various forms laid down in the table of judgments, that is to say, we must have considered the objects about which we judged as one, as many, or as both; as

substances, as causes, &c., &c. How, I ask, did we come to range our intuitions under such classes? For we received through our sensibility nothing but various impressions or representations, which our sense placed in space and in time, but which were *in sense* not otherwise combined, and were nothing but a confused congeries of single impressions. How, in fact, have we come to consider them as separate objects at all, and judge about them as single, as plural, as substances, or as causes?

* Kant says there is from the very beginning another faculty besides sense at work, unconsciously indeed and darkly working, but occupied in binding up the various data of sense into groups or unities. This faculty is the imagination, and its function he calls *synthesis*. We can never obtain a notion of any combined set of impressions, or of such a complex as distinct from surrounding impressions, without the action of this faculty. It is not, however, left to combine impressions at random, upon no principle, for being closely allied with the understanding, the spontaneous action of the understanding supplies it with its rules, and so it proceeds to combine and form objects according to the laws prescribed by the understanding.

But we saw above that the laws of combination under which the understanding acts are expressed by the forms of the various judgments. Hence these forms are a clue to the laws which the understanding prescribes to the imagination in its synthesis of representations; in order to form objects. It is the same action which produces unity in the judgment, and unity in the intuition—taking unity in a large sense, to signify systematic connexion among the parts. Hence the various phases of this synthesis of intuitions correspond to the various forms of judgment, and both are called by Kant *Categories*. They must of course be *general* phases, general ways of combining—in Kant's words, *synthesis, represented generally*.[1] They must affect the *pure* synthesis of the imagination, and must involve no data save those given by the transcendental Aesthetic, viz., multiplicity generally, presented in space and time.

* Let me endeavour to make the whole matter plain by an illustration. When you sit in a room, the senses supply you with a number of impressions all separate in space or in time, various patches of colour, various sensations of texture, of sunlight, of cold, of odours, and many others. The sensibility may give these partly simultaneously, partly in succession, but no more than these. How does the mind

come to sever them all into distinct groups, and call them separate objects, or the qualities of separate objects? Surely in this way, that the imagination, by reproducing some of the sensations just past, binds them up with those actually present, and so produces a certain grouping of representations. This grouping, however, is not carried on at random, but according to laws imposed on the imagination by the understanding. What are these laws? They are not special laws binding up any particular kind of representations, but general laws, applicable to any sort of representation, and they are not difficult to indicate.[1] We see a single chair close to us, we see several others through the room, we speak of the whole furniture of the room. This means that the understanding has directed our imagination to consider a certain quantity of sensations as making up a single chair, and has therefore imposed the Category of Unity on these sensations. When we speak of several chairs, then a larger group of sensations, in which certain features recur, has been arranged by the imagination as a plurality of units—here is the Category of Plurality. The whole mass of representations produced by the objects around us (as we call them) is again considered as a plurality of units, making up one great unity—this is the Category of Totality in application. It appears, then, that we could not obtain our ordinary

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[1] So general, as he observes of the science of nature in his *Prolegomena* (vol. iii., p. 65), as to reduce nature generally, including both the object of the external or that of the internal sense (the object both of physic and of psychology) to universal laws.

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[1] It will be observed that Kant's theory of our empirical knowledge is just as much a 'psychological theory' as Mr. Mill's, inasmuch as he holds the external world, as we know it, to be made up of our perceptions and their relations, and of these only. But Kant differs from the Association School in attributing the notions of Externality, and also of Permanence and Substantiality, to original laws of our minds, and not to the gradual teaching of associations. This controversy has been stated generally above (pp. 93, 97-8), and it seems hardly necessary to devote a separate chapter to the additional objections suggested by Mr. Mill's official chapter on the subject, (*Exam. of Hamilton*, chap. xi.) Mr. O'Hanlon's difficulties, even as they appear in Mr. Mill's short extracts, are not answered, and there are many others in reserve. For instance, Mr. Mill's object (pp. 222-3) consists of an indefinitely large group of sensations, of which a few only are present, but suggest all the rest by inseparable association. This

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implies such a set of distinct inseparable associations of each of the present sensations with each of the remainder, that our completed notions of substances should be very slowly obtained. He next (p. 224) advances the statement that the constant antecedences and consequences which we observe in Nature, and which form the most important part of our knowledge of external things—that 'almost all of these do not obtain between [present] sensations, but between the [absent] permanent possibilities of sensation'! I confess I have not yet thought myself into the attitude of Mr. Mill's school, so as to comprehend how a series of all-important indissoluble associations can arise between a set of absent possibilities, which are only suggested by certain present sensations not so associated. Here is a third difficulty. He thinks (p. 230) that with every sensation we have, we associate the idea of something different from it. This, of course, must be some different sensation. He argues that, in like manner, we come to assoknowledge of objects, if the understanding did not order our receptive faculties to group the representations they receive, as to quantity, into units, pluralities, and totalities. In like manner, the sensations which affect us are classed as Real, such as those of light and heat in the room, as the Negation of real, such as darkness and cold, or as Limitations of the real, as when we feel transitions from the one to the other. We must also consider our groups of representations in relation to each other, and so we judge that the hardness, colour, and texture of the chair are Accidents of a Substance, that the heat of the room is the Effect of a Cause (the fire), and that the various articles of furniture in the room are not re-

ciate with the sum total of our sensations this notion of something different from it. This inference appears to violate all the conditions of inseparable association. We seldom think of this sum total at all, and when we do, it comprises all the differing sensations; so that, of all our ideas, it is that which does not imply any idea of difference, except that of individual sensations, as opposed to a whole of sensations. For how could an association between two differing sensations suggest an association between a sensation and a thing not a sensation? He goes on to state (p. 230) that this something, regarded as different (I suppose in kind) from a sensation, or *a possibility of sensation*, is identified with *permanent possibilities of sensation*, because these latter are extremely unlike actual sensations [only]. Are they unlike possibilities of sensation also? Surely this part of Mr. Mill's argument cannot appear conclusive to any careful reader.

lated in either of these ways, but are substances simultaneously existing, and determining each other in place, as, for example, we indicate the place of a stool by its proximity to a sofa or a chair. Finally, we consider certain sensations *possible*, as when we see the end of the poker blueish, or brick colour, and judge that it will possibly burn us if we touch it. The judgment becomes *real*, if we make the experiment, and burn our fingers. A person sitting in the room before we came in, who had seen it thrust between the bars of the grate, and removed just when it was becoming red, would judge its burning heat to be *necessary*. Thus, then, in our ordinary experience, we are perpetually using the Categories, not only as the frames, or pure forms of our judgment, but as the frames, or pure notions, of the objects of intuition around us.[1] Such is Kant's famous derivation of his Categories from the forms of judgments—a derivation imperfectly comprehended for want of holding fast to Kant's express statement, that these pure *a priori* concepts were the rules not merely for judgments, but for all *objects of our intuition*.

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[1] It was noticed to me by Mr. J. C. Malet, that this binding up of intuitions produces *integral* wholes, whereas the binding up of concepts in judgments produces *universal* wholes—a remark worthy of notice, as suggesting a transcendental affinity between logical and real unity. Cf. *Prolegomena*, pp. 73, 76. Kant there holds that the Categories determine our intuitions, *in order to fit them for judgments.*

The following is accordingly the table of these pure concepts of the understanding:—

1. Quantity.

Unity.
Plurality.
Totality.

2. Quality.

Reality.
Negation.
Limitation.

3. Relation.

Of Inherence & Subsistence.
Of Causality & Dependence.
Of Community (reciprocal action between agent and patient).

4. Modality.

Possibility—Impossibility.
Existence—Non-existence.
Necessity—Contingency.

*Kant has called them *Categories*, *because his original design is identical with Aristotle's*, though the execution of it differs widely. On this observation English philosophers, especially Hamilton and Mansel, have made such comments as disclose a complete ignorance of Kant's derivation of the Categories. They say that he brought a new, nay an opposed meaning into Aristotle's time-honoured nomenclature, because the investigations were totally diverse. In his usual antithetical style, which palms off rugged clearness upon us as good sense, Hamilton says that Aristotle was investigating the laws under which the object is known, Kant on the contrary the laws under which the subject thinks.[1] If the reader has followed my exposition in the previous pages, he will have seen that Kant's Categories are just as much as Aristotle's, 'the highest classes to which objects of our knowledge could be generalised,' nor was Kant likely to make so silly a blunder as to assert his intention to be the same as Aristotle's, if it were only to be contrasted with it. This is not the only place in which commentators have had the audacity to contradict the plain statements of the Critick as to Kant's intentions.

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[1] Cf. Note A to *Reid's Works*, p. 762.

But as Kant says, the execution of the plan differs widely from Aristotle's. For the above is the list of all the pure notions of combination, or synthesis, which the understanding contains, and through which it is an *understanding*, for by them alone can it *understand* the variety of intuition, by grouping it into objects. This table then and its divisions are deduced from one general principle (that of judgments) instead of being picked up at random by mere empirical induction, which can neither certify the completeness of the list, nor give any reason why these and no other should be in the pure understanding. Hence Aristotle's table, even with the post predicaments, was never complete; it included modes of sensibility (*quando*, *ubi*, *situs*, &c.), an empirical notion (*motus*), and even deduced concepts (*actio*, *passio*).

Apropos of the last-named notions, Kant observes that the Categories, as generic concepts of the pure understanding, have their *pure deduced* *concepts* under them, which he proposes to call *predicables* of the pure understanding. To draw out a table of these would be here to turn from his object, and he therefore passes the matter by with this notice. He also declines to define the Categories, as he wishes to avoid collateral controversies,[1] and is only here concerned with analysing them for his special purpose, not building up a system of pure reason, in which such definitions would be fairly demanded. He considers that with the basis here supplied the task will not be difficult.

§ 11.* In the Second Edition, two sections of reflections on the Categories were appended, which I shall pass over as briefly as possible, as not belonging to his main argument. But I must call attention to the very first statement in these sections, which contains a vindication of the common charge brought against Kant, that he was enslaved by the love of symmetry, and forced such Ideas as those of the world and God into the scheme supplied by the Categories and logical syllogisms. Not only is the table, says Kant, necessary in the theoretical part of philosophy, both in giving us a plan for a *complete system* of our science, as well as its *division on fixed principles*, but as it contains all the elementary notions of the understanding, and even the form of their systematic combination, so it must suggest for any speculative science both the *heads*, and the *arrangement* of them. Kant himself applies them to natural science in another treatise. If the critics then had objected to Kant that he was violating the natural relations of things by forcing them into his classification, he would answer that not he, but nature, had prescribed it. All our thinking is only comparison, all comparison is judging. Analyse therefore the possible forms of judgment, and you have all the possible kinds of thinking. If this be so, the arrangement according to the Categories (and of course according to the syllogisms derived from them) is not artificial, but the most natural and necessary possible, and moreover one which will apply equally to all theoretical sciences.

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[1] In a passage of his First Edition, which will be found in vol. iii., p. 220, sqq., he goes more fully into the reasons why the mere Categories *cannot* be defined. These passages were modified in the later Editions. Notwithstanding there are, in the discussion of the Schemata of the various Categories (*Critick,* pp. 110–12, 181) various indications of the Categories, which amount almost to Definitions, by means of the schemata.

Remark 1. The table naturally falls into two subdivisions, the one referring to objects of intuition, the other to the existence of these objects. These he distinguishes as *mathematical* and *dynamical* Categories. The second, as they consist of relations of objects either to other objects, or to us, have correlates.

Remark 2. Instead of a division by dichotomy, each class has three members, the third arising from a combination of the first and second. So *totality* is nothing but plurality considered as unity; *community* the *causation* of different *substances* in determining one another, and so of the rest. Nevertheless, this third Category is no mere *predicable*, or deduced concept. For it requires a distinct act of the understanding. So our notion of a *number* (which is a totality of several units) is not always possible, even when we have the concepts of unity and plurality before us, as for example in the case of infinity. Neither do substance and cause explain, when merely combined, how one substance can *influence*, or be the cause of something in another.

Remark 3. The agreement of the Category of *Community* with the corresponding form of the disjunctive judgment is not at first sight obvious. But, we have already seen (above, p. 184), that the sum of the predicates in a disjunctive judgment makes up a total sphere of knowledge, in which the parts are not subordinate, but co-ordinate, as mutually exclusive, being the parts of an aggregate. A similar combination is conceived in the *totality of things*, which are not subordinated to one another as effects are to causes, but thought as co-ordinate, and affecting one another; as for example, in a body, the various parts are co-ordinate, and mutually attract and repel each other. The understanding pursues the same proceeding, when representing to itself the sphere of a divided concept, and the parts of a divided thing; both consist of a whole, containing mutually exclusive parts.

§ 12. The celebrated proposition, *Quodlibet ens est unum verum bonum*, though not included by scholastic philosophers in the list of Categories, nevertheless holds among them a position which ought to give it this *status*. It is worth inquiring whether some real though misunderstood rule of the understanding may not be at the basis of this principle, though it is now antiquated and in desuetude in our philosophical books. These pretended transcendental attributes of things are nothing but logical requisites and criteria of our *concepts of things* generally, and place the Categories of Quantity at the basis of this cognition. But though the schoolmen were using these Categories only logically, in a formal sense, they incautiously raised them to the position of properties of things *per se*. In every cognition of objects there is a *unity* of the concept, which may be called *qualitative unity*, as when we speak of the unity of a play, a speech, or a story. Secondly, there is *truth* as regards its consequences. The more true consequences follow from a given concept, the more evidences have we of its objective reality.. This may be called the *qualitative plurality*. Finally, *Completeness*, in that this plurality can be reduced to the unity of the concept, and to it alone—this we may call its *qualitative completeness* or totality. It appears, then, that the Categories of Quantity in which the units that produce the *quantum* should be thoroughly homogeneous, are here used to combine *heterogeneous* parts of our cognition, by using the quality of cognition as our principle. So the criterion of an hypothesis (or other concept) is its *unity*, i. e. its not requiring auxiliary hypotheses; the *truth*, or agreement with itself, and with experience, of the consequences deduced from it; and, finally, its *completeness*, in that the consequences point back to this, and this alone, so that what we conceived synthetically can be shown analytically. The list of Categories are not then to be increased by these pretended attributes of things, which only come into existence by leaving out all relation to things, and reducing our mere treatment of concepts to general logical rules.

* § 12. *Kant's Table of Categories, and his Critics.*—It is curious that the very ground upon which Kant attacks the Categories of Aristotle has been urged as the particular objection to Kant's own list. 'It was a design,' he says (p. 65), 'worthy of an acute thinker like Aristotle, to search for these fundamental concepts. Destitute, however, of any guiding principle, he picked them up just as they occurred to him.' Now, let us hear Schwegler,[1] 'The method of Fichte, just like that of Hegel afterwards, is a combination of the analytical and synthetical methods, by which Fichte earned the credit of having first deduced the

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[1] Ed. Stirling, p. 262.

Categories of philosophy from one single point, and of having brought them into connexion, instead of taking them merely empirically, and co-ordinating them, as had been done, even by Kant.' The same view is taken by Mansel:[1] 'the Kantian Categories are not deduced from an analysis of the act of thought, but generalized from the forms of the proposition, which latter are assumed without examination, as they are given in the ordinary logic. A psychological deduction, or preliminary criticism, of the forms themselves, might have considerably reduced the number.' And so both Fichte and Mansel have given further analyses, which the curious reader may find in the treatise just quoted of Mansel's, and in Fichte's *Wissenchaftslehre.*[2] These analyses are in substance the same, and consist in identifying quality with quantity, and discarding relation and modality, on the principle that substance and cause are implied in them, and that these notions exclude them from the first rank. I suspect that, upon a careful perusal of Mansel's discussion, the reader will be glad to fall back upon Kant's plainer, if more empirical, classification, and will agree with him in not taking any interest in the subtleties of modern philosophers on the subject.[3] There is, however, one charge from which Kant must be cleared, and that is, that he did not go upon a fixed principle in his Table. His introduction to the subject is quite explicit. 'Transcendental philosophy,' he says (*Critick*, p. 56), 'has the advantage, and moreover the responsibility, of searching for its concepts upon a principle, because they originate pure and unmixed from the understanding, as an absolute unity, and must hence be connected according to one concept or notion. Such a connexion gives a rule,' &c.

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[1] *Metaphysics*, p. 193, *note*.

[2] *Works*, vol. i., p. 166, *sqq*.

[3] The great diversity of philosophers as to the reduction of Kant's Categories is remarkable, and is an argument against

What is the principle according to which we must proceed? He shows that the understanding has no power of intuition, and hence can only regulate and bring into classes and unities the intuitions given by our sensibility. This spontaneous faculty he calls the function of the understanding. And what is the only use we can make of these unities? To judge by means of them. And how do we judge by means of them? We repeat the process by which they have been already formed, and bring an additional representation under them. The understanding has no other duty at all; hence it may be simply called our judging faculty. This is the *a priori* argument and principle upon which he bases his

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such reduction. Cousin reduces them to substance and cause; Fischer and Schopenhauer, to cause only; Hamilton to Condition, which appears to be the Category of cause without the schema, or of relation generally. When philosophers differ so widely, it may be well to inquire whether any remedy is really required.

Table of the Categories; so that, in this sense, his list is neither purely empirical, nor picked up at random.

The number of the classes of judgments he did take for granted, from the existing treatises on logic (which, I suppose, discovered them empirically); but this because there could not be a class of judgments without a corresponding expression for them in human language, and the grammatical analysis of language is long since completed; and because he saw distinctly that psychologically they depended upon different acts of the mind. That it was possible to reduce them in number, was a point which came distinctly before him, and which he combats in his observations on the Table of Judgments; and in farther remarks (p. 67), he even insists on some judgments, which are logically reducible under one head, being kept apart as psychologically distinct. It is not fair then to charge Kant with having evaded or overlooked a more complete psychological deduction; but we must rather place his authority (and his psychological acumen) over against those of the critics, and supposed improvers, of his system.

It is obvious that two sorts of reduction are possible: we may either reduce the number of the Categories under each head, or we may reduce the various heads or classes to a lesser number. The first description of reduction has been (as was observed already) noticed and rejected by Kant. The second has been attempted by Mansel. Now, that there exists an analogy between the classes of Categories would be naturally suggested, and probable, from the unity of the pure reason, upon which Kant insists frequently, and this would also suggest the same number of judgments under each head. But the question remains—Is this similarity *Identity*, or merely *Analogy?* Kant could only regard them as identical, if the quantity and quality of judgments were proved identical. Take, for example, the supposed identical Categories of unity and reality. Because affirmation asserts unity between two representations, can we jump at the conclusion that affirmation is identical with unity? Certainly not; an asserted unity between representations has nothing to do with the Category of unity, derived from singular judgments. Of what does a judgment consist? Of a subject, a predicate, and a copula. What can we say about the subject? It may be either one, or many, or a totality (the many regarded as a unity). What about the predicate? We may assert it to be identical with this one, or many, or whole, or the reverse. How can this act of mind be declared the same as the former? If the predicate of a judgment were singular, and we affirmed it of any sort of subject, we should be much nearer the Category of unity.

So, again, in a negative judgment we regard one attribute as not co-existing with another; but here, if we take a singular judgment, viz., 'Socrates is not foolish,' we do not *necessarily* imply other subjects which have this attribute, and hence, we no not obtain plurality. But supposing a class were here implied, it would surely be just as much implied in the corresponding affirmative judgment, which would accordingly suggest plurality as much as unity. Possibly Mansel was misled by his own statement, that in a judgment two concepts are considered 'in relation to *a common object* of intuition.' Perhaps the correct expression would be, 'in relation to *common objects*,' viz., how far the objects which rank under one of these concepts rank also under the other. If so, to think the co-existence or non-existence of attributes in one or more subjects is obviously distinct from thinking the unity or plurality of these subjects themselves. The former are, indeed, unifying and dividing processes, but so are all functions of thought, as Kant has said.

It would be tedious in this place to urge all the similar objections which could be made in detail to Mansel's reduction. But in general, except we can reduce the psychological acts expressed in the various classes of judgments to the same act, we have only demonstrated analogy, and not identity. The attempts, then, of Fichte and Mansel corroborate Kant's view of the symmetry and harmony between the various acts of the understanding as one complete whole; for these analogies are strong enough to suggest to acute minds complete identity.

CHAPTER VII.

INTRODUCTION TO THE DEDUCTION OF THE PURE CONCEPTS OF THE UNDERSTANDING. SECTION I.[1]

§ 13. *Of the Principles of Transcendental Deduction generally.*—Jurists, in discussing claims, are wont to distinguish the *quæstio facti* from the *quæstio juris*, and used to call the proof of the latter the *Deduction*, that is to say, the deduction of the claim from acknowledged principles, or documents. We use a number of empirical concepts without any such justification being required by ourselves or others, because experience is always at hand, to prove their objective reality. Yet here, too, there are some concepts, such as *luck* and *fate*, which, though commonly recognised, cause us great difficulties when the question *quid juris* is asked as regards them, seeing that neither experience nor reason affords the grounds of answering it.

But among the various concepts in the complex tissue of our knowledge there are some meant for pure *a priori* use, and their claims always require a deduction, for proofs from experience are here insufficient, and yet we must know how these pure concepts can refer to objects. The explanation of the way in which they do so Kant calls their transcendental deduction, as distinguished from the empirical, which shows how a concept is acquired by experience or reflection upon it, that is to say, the facts from which our use of it arose.

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[1] The heading is: 'The Transcendental Analytic,' Book i., part 2.

There are two very diverse kinds of notions which agree in referring *a priori* to objects—the notions of Space and Time as Forms of Sensibility, and the Categories as concepts of the understanding. If a deduction of these (or proof of their possibility) is necessary, it must, of course, be transcendental, as their distinguishing feature consists in applying to objects, without drawing anything from experience in order to represent them.

Of course, we may inquire quite independently into the occasions when both this part, and the rest of our knowledge arose in experience—an experience which contains two dissimilar elements, the *Matter* given by the senses, and the *Form* for ordering them, springing, on the occasion of the former, from pure intuition and from thought. Locke deserves the credit of first opening this path. But a *deduction* of pure *a priori* concepts can never be thus obtained. For then we only explain from experience *the fact that we possess* pure cognition, whereas these concepts must exhibit a very different pedigree from that of empirical concepts. No one, therefore, who understands their nature can accept anything but a transcendental deduction of them.

But granting all this, is such a deduction absolutely necessary? We have, indeed, pursued the notions of space and time to their source, by means of such a deduction, and so explained and fixed their objective value. Yet Geometry follows its course through nothing but *a priori* cognitions, without asking for any certificate of the legitimacy of its fundamental notion—space—from philosophy. But the use of this notion here applies to the external world of sense, where all geometrical cognition is immediately evident, being based on *a priori* intuition, in which the objects are given (as to form) by our cognition. When we come to the pure *concepts of the understanding*, the necessity becomes apparent, not merely of justifying them by a deduction, but of giving a deduction even of the notion of space. For these concepts refer to objects not through intuitive predicates, but through pure thinking. They refer to them generally, and are neither based on experience, nor can they show any object in *a priori* intuition, affording a basis for their synthesis. Hence they not only excite general suspicion about their objective validity, and the limits of their use, but even involve the *concept of space* in this suspicion, as they are disposed to apply it beyond the conditions of sensuous intuition. This is the reason why a transcendental deduction[1] was given above. The reader who is not convinced of the inevitable necessity of this deduction will only grope in the dark, and end as ignorant as he began. But he must also perceive the obscurity and difficulty of the investigation, and not complain of weariness in its solution. For upon this it depends whether we are to give up all our claims to any possessions in the favorite department of metaphysic, beyond the bounds of all experience, or bring this critical investigation to a successful issue.

There was no great difficulty in showing (in the Aesthetic) how the notions of space and time, though *a priori* cognitions, were yet related necessarily to objects, and rendered a synthetical cognition of them possible, independent of all experience. No object can appear in empirical intuition except by means of thse pure forms, hence they are pure intuitions, which render objects possible as phenomena; their synthesis is therefore objectively necessary.

But as phenomena can appear in intuition, without being necessarily related to the functions of the understanding, a difficulty arises which did not occur in the Aesthetic, viz., *How are subjective conditions of thought to have objective validity*, or be the necessary conditions of all cognition of objects? Take, for example, the concept of cause, which signifies a peculiar kind of synthesis, by which we put after *A* something quite different *B*, according to a fixed rule. It is not obvious *a priori* (empirical evidence being inadmissible), why phenomena should contain anything of the sort, and we may doubt whether such a concept is not idle, and baseless in experience. Objects would not be objects did they not conform to space and time, but it is not so clear that they must conform to the conditions which the understanding requires to produce unity in its thinking. Phenomena could appear without any such conformity. It has been suggested (by Hume and others) that experience is perpetually offering us examples of these regularities in phenomena, which are quite sufficient to suggest the notion of cause, and establish its objective validity. Kant thinks that such concepts must either show an *a priori* basis, or be abandoned as mere chimeras. He points, as usual, to the *strict necessity* of the sequence of cause and effect, and the absolute universality of its application, as attributes which cannot possibly be given by experience. This attitude of Kant has already been discussed.[1]

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[1] He calls it a transcendental exposition in the Aesthetic.

TRANSITION TO THE TRANSCENDENTAL DEDUCTION OF THE CATEGORIES.

That our synthetical representation should necessarily correspond or coincide with its objects is only possible in two cases; either if the object makes the representation possible, or if the representation, and it alone, makes the object possible. In the former case, the relation is empirical, and the representation could never be possible *a priori*. This is the case with phenomena, so far as they are sensations. In the second case, our representation does not, indeed, cause the object to exist (if we except the causality of the will, to be elsewhere discussed), but nevertheless determines it *a priori*, if through the representation alone we can know anything *as an object*. This knowledge requires two conditions necessarily, intuition, by which the object is given merely as an appearance; and a concept, by which an object is thought, corresponding to the intuition. We have above explained how all phenomena must necessarily agree with our intuition, as they only appear (and are intuited) through it. Now comes the question, whether there are not also concepts within us, as antecedent conditions *a priori*, under which alone anything can be thought an object. If so, all empirical knowledge of objects must correspond to these concepts necessarily, or else no *object of experience* is possible. But as soon as we go beyond the mere data of the intuition of the senses, all our experience does contain *concepts* or notions of objects given in intuition, or appearing in it; so then concepts of objects in general do lie at the basis of all our empirical cognition, as *a priori* conditions. Consequently the objective validity of the Categories, as *a priori* concepts, depends on this, that through them alone experience (as far as the form of thinking is concerned) is possible. Of course, they have a necessary relation to objects of experience, if it is only by means of them that such an object can be at all thought.

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[1] Above, p. 94, sqq.

This then is the principle on which the transcendental deduction of all *a priori* concepts depends. To explain the development of experience in which they occur, is not a deduction, but an illustration of them, as it does not prove them necessary. Without showing their primitive relation to all the possible experience in which objects occur, their relation to any single object could never be comprehended.

In his First Edition, Kant closes this preface to the Deduction with a mention of the three faculties [illegible] that afford the clue to the succeeding discussion.[1] In the Second Edition he substituted the following observations. 'The celebrated Locke,' he says, 'ignoring totally any such deduction, and finding the pure concepts of the understanding in experience, deduced them from it, and was yet so illogical, that he attempted in this way to reach cognitions far beyond the limits of experience.'[1] David Hume saw that this latter attempt necessarily required concepts with an *a priori* origin. But as he could not understand how the understanding came to think certain concepts necessarily joined in the object, which were not *per se* joined in the understanding, and as it did not occur to him that the understanding might, through these very concepts, be the originator of experience, he was compelled to derive them from experience, and through constant association, which produces *custom* or subjective necessity, falsely deemed objective. He was logical enough to deny that with such principles we could ever pass the bounds of experience. But these empirical deductions are refuted by the fact, that we actually possess scientific cognitions *a priori*, viz., pure *mathematic* and *general physic.*

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[1] This passage, which I have given in my translation of Fischer's Commentary, p. 76, *note*, merely anticipates the after discussion, and therefore requires no farther mention here.

The former of these celebrated men opened the door to *enthusiasm*, for if the reason has pretensions or claims on its side, it will not be restrained by vague exhortations to moderation; the latter abandoned himself to *scepticism*, as he thought he had discovered so universal a delusion mistaken for sound reason in our faculty of knowledge. We are now to essay whether the reason cannot be steered safely between these rocks, and whether we cannot save for it the whole sphere of its proper activity, while assigning to it fixed and determinate boundaries.[1]

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[1] This is the ordinary view of Locke's philosophy, which ignores the intellectual side of his system. But this is not the place to correct it. Cf. Prof. Webb's *Intellectualism of Locke*, passim.

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[1] The explanation of the Categories, with which he concludes this section, is only an amplification of the remarks explained above, p. 187, sqq., to which I refer the reader, as I desire to remove from this exposition, as far as possible, the many repetitions and amplifications, which have misled the student of Kant hitherto.

CHAPTER VIII.

THE DEDUCTION OF THE CATEGORIES. THE FIRST EDITION, AND THE PROLEGOMENA.

* WE have now arrived at the great *crux* to most readers of the Critick, the famous Deduction of the Categories. The solution has been, to some extent, implied in the foregoing discussion, and the intelligent student will, doubtless, anticipate the gist of Kant's argument; but we must not be content with stating the theory; we must also give some comparative account of the various forms which the discussion assumed in the First Edition of the *Critick*, and in the *Prolegomena*, published in 1783. Were this omitted, the reader might ask why Kant had obscured by prolixity and by repetition a discovery in itself plain and comprehensible, and which can be stated in a brief compass.

* Perhaps the first and most important help the student can obtain from a commentary on this part of the Critick is to have the repetitions in Kant's argument carefully pointed out. The discussion in the First Edition goes over the same ground three

times. As he tells us himself,[1] 'I have thought it better, in the four following paragraphs rather to prepare than instruct the reader, and not to lay before him the systematic discussion till the succeeding third section.' All the *momenta* of the proof are, however, contained in this preparatory discussion;[2] and he accordingly, in opening the third section (p. 207), says, 'The detached observations made in previous section (containing the four paragraphs), we shall here unite and present in a connected form.' The reader will, therefore, find in this section a *repetition* of the observations in the previous section, not, however, without some modifications. For having hitherto pursued the analytical method, starting from empirical perceptions, and passing up by analysis to the *a priori* elements contained in them, he now tells us (p. 207), that he will 'begin from pure apperception'—in other words, give us the same proof *synthetically*. He does this briefly and completely (pp. 207-10), but having done it, he reverts to his former analytical procedure, and says (p. 210), 'We shall now expound the necessary connexion, &c., beginning from below, from the empirical extremity.' He then goes over the very same ground, and in the very same order, as in the four preparatory paragraphs, amplifying a little here and there, modifying a few expressions, but adding little, except (as we shall see) that he shows the close relation between the three faculties expounded, and so brings into a connected form the observations before detached. If the reader will attend to these hints, he will considerably curtail his labour, and save himself the perplexity of endeavouring to find new arguments, where Kant is merely repeating and enforcing old ones.

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[1] Vol. iii. p. 194.

[2] Vol. iii. pp. 194-207.

As the Second Edition differs mainly from the First in developing at great length the synthetical proof, very briefly given at first (pp. 207–10), I shall consider that part of the discussion by the light of the Second Edition, and shall give an account, as brief as possible, of the First Edition, omitting this short passage.

A few words will here show us the attitude of the *Prolegomena* on the same subject, in a passage following the analytical method also, as Kant expressly tells us at the outset of his shorter work. I already called attention to the two-fold character of the Categories, which are both general concepts, or frames of objects of intuition, and also pure general forms of judgments. These two functions are closely related, for the frames into which the former bring intuitions are necessary conditions of these intuitions becoming fit for judgments; our intuitions are, as Kant says, determined by these Categories, in relation to some one of the pure forms of judgments.[1]

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[1] See especially his statement in the *Prolegomena*, iii. p. 73.

The deduction of the Categories need therefore only establish their objective necessity in either of these relations, and the other will necessarily follow. For when we speak of the Categories being necessary for our experience, what do we mean by experience? We mean a great complex, embracing a vast number of *objects*, and we also mean the legitimate and orderly *connexion of these objects* into a great harmony, or unity. This connexion of objects, which implies certain necessary relations among them, can only be expressed or conceived in judgments concerning objects. If the Categories are necessary for the formation of the judgments of experience, it is clear that they must also be necessary for the objects of these judgments, since nothing can be for us an object except it be either the subject or predicate of some judgment. The necessary laws, therefore, of the connexion of objects must hold good of these objects themselves. Such an inquiry Kant calls a deduction of the possibility of [the faculty of] experience, as contrasted with a deduction of the possibility of the objects of experience. The latter side of the deduction had been brought forward prominently in the First Edition, and it is only[1] in the two summaries of the discussion, that he notices the power of the understanding to make laws for nature, in fact, to establish *necessary connexions* among the objects of our experience. This latter is then the aspect of the Categories which he takes up in his Prolegomena.[1]

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[1] In the fourth paragraph, in section 2, and at the end of section 3, especially p. 203, vol. iii.

Starting from the statement that Nature means a necessary synthesis of phenomena, not of things *per se*, he shows (§ 15) that there is a pure science of such nature, which possesses universal and necessary synthetical judgments applicable to all nature, whether internal (psychology) or external (physics). These judgments are the *laws* of nature. But the word nature, he adds (§ 16), also means the complex of all the objects of experience. He proceeds to inquire (§ 17) which form of the problem (the same in either case) is preferable, and he decides that, owing to the ambiguity of the word *object*, the Kantian sense of which was then new and strange,[2] it is better to take the formal side, and discuss the possibility of experience, upon which the possibility of the objects of experience necessarily depends. Following this course, he shews (§ 18), that our ordinary judgments of perception cannot become judgments of experience without expressing a *necessary* connexion, or a connexion in the object, as it is called, when all men agree in the connexion. But this objective validity or necessity is merely equivalent to universality. What, then, must be added (§ 20) to the perceptive judgment, to make it a necessary judgment of experience? Simply this; the perception in question must be subsumed under such a concept as determines for it a place among the general forms of judgment.[1] These general forms of judgment will, therefore, suggest the table of pure concepts which correspond to them. The whole argument is clearly and concisely summed up in § 23, which I recommend the reader to study carefully, before he accompanies me farther. I can add nothing to the statement in that place.

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[1] Vol. iii. pp. 63, sqq.

[2] An object, in the proper Kantian sense, consists of a number of sensations, bound up into a necessary unity. As this latter element cannot be given by mere sense, an act of the understanding, or of the imagination, is necessary in knowing any object. As the former element can only reach us through our sensibility, objects only exist in our experience, and things *per se* are improperly called by the same name. This will appear more fully in the sequel.

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[1] As to the examples given by Kant (vol. iii., pp. 71-4) there is no difficulty except in the case of the proposition, 'the air is elastic.' He arrives at this in a peculiar way, and himself confesses that the illustration is obscure. If we compare the analogous case of 'the sun warms the stone,' discussed in his note (p. 74), we shall see that he considers the proposition 'when the sun shines on the stone, it grows warm,' to express the attitude of the mind in mere perception, whereas the categorical equivalent marks the classing of the representations under an *a priori* concept. But I confess that I do not see my way in the other case so clearly. Kant indicates that after we have established the air to be the necessary condition, or cause of expansion, we then advance to the judgment, 'the air is elastic,' in which we regard elasticity as a quality necessarily belonging to the air. Mr. Monck has suggested to me that Kant had the experiments of Torricelli in his mind, by which both the weight and the elasticity of air were demonstrated. It was shown that if the pressure on the atmosphere be diminished, its volume increases, as for example, if a partially filled bladder be placed

I now revert to the exposition of the First Edition (Vol. iii., Appendix A.), for the most part analytical, like that of the *Prolegomena*, but differing, as I have said, in two points: (α) there is a short synthetical exposition at the opening of section 4; (β) with the exception of the concluding passages in the duplicate analytical exposition, the Categories are rather considered as pure concepts of objects, than as pure forms of judgments combining objects. If we omit these passages, and eliminate repetitions, we may sum up the argument as briefly as possible in the following way.[1]

A concept (p. 191) is nothing but a combination of attributes. If this combination is to mean anything more than a mere empty frame, the attri-

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in a vessel from which the other air can be removed by a pump, the bladder will become fully distended, or even burst. This expansion depends on the nature of the air itself (requiring only the absence of counteracting causes) as its positive cause. I have no doubt this explanation is the true one, and clears up the difficulty as to Kant's illustration.

[1] I cite the pages of my English version in Vol. iii., Appendix A, so that the reader may verify the commentary at every step.

butes must be supplied by intuition; thus only can our concepts refer to the sole objects we can know, the objects possible in our experience. If then there be in us *a priori* concepts, even they must refer to experience, not of course as its offspring, but as rendering it possible; on this ground only can they be objectively valid. The possibility of experience, therefore, is the real point to be investigated. Whatever attempts we may make to grasp such notions as God or spirits by the aid of the pure concepts or Categories at the basis of experience, we must still conceive these things as objects, and therefore start from the same basis as we do in our legitimate experience. The Categories, therefore, will be sufficiently justified, and proved objectively valid, 'if we prove that through them alone an *object* can be thought.' (Here, then, he keeps out of sight the Category as a pure form of judgment, and treats it as a pure frame of objects of intuition.) But as other faculties are concerned, Kant proceeds to expound the subjective sources which make objects possible, and how far these sources are of transcendental use, or at the basis of our experience of objects.

Let the reader hold fast to Kant's prefatory remark (p. 194) that all our representations are bound together by one bond at all events, that of Time, the formal condition of our internal, and therefore indirectly of all our sense. All our representations are brought into at least one mutual relation, in Time.

But (1) as all our knowledge of objects requires a successive series of representations (both separate in space and differing in kind), there must be in the mind a power to grasp these separate details, and consider them as one complex object of intuition. This act (which is a function of our imagination applied to present objects of sense), Kant calls the *synthesis of apprehension.* But since even pure space, and time regarded as objects, cannot come into the mind without their parts being grasped together in this way, though they are *a priori* representations, it follows that this synthesis is possible *a priori*, and there is in us a *pure* synthesis of apprehension. (2) There is, moreover, another combinative faculty of mind, which causes past representations to come back to us in groups, and not singly. Our imagination reproduces them according to a law of association, which implies some prior affinity existing among them. This reproduction of past phenomena is equally necessary to our experience, for we could not think of a large number, or a long time, if we lost from our minds the earlier numbers or moments without recovery. This faculty of the imagination may then be called the *Reproductive* synthesis of the Imagination. Even this, however, is not enough. (3) When we have apprehended the present details, when we have reproduced the past impressions, what guarantee have we that they are identical with those formerly intuited? They must be *recognised* in the concept we form of them, a concept which reduces this multiplicity to unity, and declares them to be the phenomena of a single identical consciousness. When we have produced this unity, we call it an *object.* What is this object? As we can know nothing beyond our representations, the object can only mean a necessary combination of them, which forbids our doing so at random, or capriciously. But such necessary combination can only be produced *by the understanding*, for the senses merely give us isolated representations. Thus an external object of these representations, such as *body*, is conceived just as we conceive (p. 199) a *triangle* to be an object, and yet this consists in nothing but a certain necessary combination of three right lines, under a concept, and may not exist in external nature. If the combination be necessary, it must, according to Kant's fundamental principles, depend on a transcendental condition. How can the necessary unities, which produce in us the notion of objects, be produced *a priori* by the understanding?

The required condition Kant finds in the *Transcendental apperception.* This does not mean the empirical consciousness of self, given in what is called the internal sense, but the transcendental condition, which renders this internal sense possible; that is to say, the mental unity, or identity, which we feel even when intuiting such *a priori* objects as space and time. All representations must be mine, they must come under the identity of my permanent conscious self. Yet it is not the *existence* of this self, but its *action* or function, of which we are conscious. We mean no more by this feeling of personal identity than that it is the same identical function which combines phenomena into objects in all our experience. We cannot, therefore, be conscious of the identity of self except as the 'unity of the synthesis of all phenomena,' of course according to some plan, or some concepts yet to be determined.

Let us now turn back and consider what our notions are of *object* in general, and what we mean by a concept having objective validity. Our thoughts are said to refer to objects, when they apply to our intuitions, which again are supposed to refer immediately to (phenomenal) objects. But even these objects are only phenomena, and are, therefore, referred farther to a transcendental object, which is a mere indefinite supposition of thought, not obtainable by any intuition, and therefore the same in all cases, a mere unknown quantity, or x. Our whole notion of a definite object is a number of intuitions, necessarily combined. As the determinate intuitions are *ex hypothesi* absent in a general notion of object, what remains but the necessary combination, or synthesis, the frame-work, so to speak, of the intuitions? If this be so, the transcendental apperception just explained affords us the necessary bond of unity, or synthesis, and supplies us with the general notion of object, which contains nothing else. This, then, is the form of phenomena, as space and time are the form of intuitions.

4. Kant adds a paragraph explaining how the Categories may be *a priori* cognitions, and enforcing this truth. When I speak of our experience, I mean one great unity, one vast combination of all the phenomena presented to me as *my* phenomena. Except they belong to this unity, they are no part of my experience. But whatever conditions are imposed on my (faculty of) experience must, of course, be equally imposed on the objects of experience acquired through that faculty. But the Categories have above been shown the necessary conditions of judging, therefore of thinking, in any experience, therefore they afford to objects also of experience their possibility. Thus they are *a priori* cognitions, and yet objectively valid. The Categories are, in fact, phases of the pure apperception, and all consciousness must be subject to it. Through it, therefore, or under it, they legislate for phenomena.

All empirical derivations of these Categories are idle, for they do not account for their *necessity ;* and secondly, they postulate an universal law of association among phenomena, which suggests to us laws, and they give no explanation of this association. How can phenomena be conceived as related to one another by a thoroughgoing *affinity*, which alone explains our associating them? On Kantian principles, this affinity is transcendental, and produced by their all being subject to one condition—the pure apperception, which binds them together by a pure synthesis. So it comes that the understanding prescribes laws for nature. Hence we can make *a priori* assertions about nature, and a strict science of nature is possible.

But the reader who desires to avoid repetitions, and obtain the shortest possible exposition of the analytical deduction, may, I think, pass by the four preparatory paragraphs, and confine himself to the repetition of their substance in pp. 210–17. For there, as Kant tells us, he has connected and brought into relation the isolated facts of these paragraphs. There it is that he declares the synthesis of apprehension to be the work of the imagination, which is necessary in knowing even ordinary objects (p. 211, note), and so brings the synthesis of apprehension and reproduction into relation. There it is more especially that he expounds the relation of the imagination and pure apperception, showing that association must be based on affinity; that this affinity is given by the union of all phenomena in one consciousness, but that this synthetical unity of consciousness, which is intellectual, can only act on sense by directing the productive imagination to combine phenomena according to fixed laws. The Imagination is, in fact, the go-between, which mediates between the pure understanding and the phenomena; it is only reproductive as regards these phenomena themselves, but *productive as regards the order* in which they are reproduced. Kant here trenches upon the ground to be hereafter occupied in the schematism, I shall therefore say nothing more concerning it now. Finally, the statement that the understanding prescribes laws for nature is more fully developed in the end of the discussion, pp. 215-17. He adds a caution, that we cannot suppose empirical laws to be directly deducible from the pure Categories, any more than all the varieties of intuition could be conceived from pure space and time. But nevertheless, according to this very analogy of space and time, all empirical laws must be built on the type of the Categories, in other words, all our experience, *as to form*, must be conformable to them. More than this our deduction never attempted to prove.

CHAPTER IX.

THE DEDUCTION OF THE CATEGORIES. THE SECOND EDITION OF THE CRITICK.

We now approach the discussion in its ultimate form, as it appears in all the later Editions of the Critick. The first point to be noted is that in his first Preface, he had himself carefully distinguished two sides of his Deduction, one consisting of a view of the subjective faculties of the mind, the other a mere explanation how objects can become possible. This latter is the proper Deduction; the former, which consists in assigning a particular set of causes for a given effect, is not so.[1] It was, therefore, naturally to be expected, that when he desired to compress some parts of his original work, in order to make room for expansion in others, this highly important, but unnecessary exposition should be curtailed. Moreover, the first four paragraphs of the First Edition were fully reproduced in the sequel, and besides the publication of the Prolegomena during the interval, supplied an independent analytical exposition.

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[1] Cf. above, p. 7.

I may add, that these paragraphs, and especially an introductory statement,[1] also suppressed, seemed to attribute to *sense* a power of combination which Kant carefully qualified on farther consideration. He would not speak in the Second Edition of a *synopsis of sense*, and he was more careful to show that the synthesis of apprehension was really the work of the imagination.

As therefore the *pure apperception*, or synthetical unity of apperception, was the point most obscure, and most difficult of comprehension, he determined to develop his brief synthetical exposition in the First Edition,[2] in order that he might 'begin from pure apperception,' and explain it more fully to his critics. It was necessary to do this in two directions, first, for those who could not understand him, or see how the synthetical power of the understanding could form a principle of unity in nature; secondly, for those who exaggerated our knowledge of this very pure apperception, and held that the Ego was given to us directly, not as a phenomenon, but as a noumenal reality.[3] The sections 16-19, therefore, contain his fuller exposition of the synthetical unity of apperception. The second part of § 24 and § 25 contain his expanded refutation of the second error. This latter passage, then, may be postponed by the reader as not forming a necessary part of the deduction.

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[1] Cf. K. Fischer's Commentary, p. 76, and Hartenstein's *Kritik*, p. 120, note.

[2] iii., pp. 207-10.

[3] The danger of being misunderstood in this direction affords another reason for his striking out the passage (p. 213) in which he spoke of 'the fixed and permanent Ego' as the correlate of all our representations. He insists here more strongly on what he had already stated in the First Edition, that we are directly con-

In the next place, the opening of § 15[1] is to some extent a repetition of his remarks on synthesis, in § 10, adding a few important points, but almost ignoring what he said of synthesis in the former section. The same observation applies more strictly to §§ 16 and 17, which merely amplify and reinforce the same points in varied language. Let me observe, lastly, that the first part of § 24 anticipates the schematism of the Categories, and discusses the function of the productive imagination, which must again come before us at greater length in that chapter. In brief, then, I recommend the reader the following course in this discussion. Let him read § 15, comparing it with § 10, and let him next read § 19. Let him then read § 16 or § 17, either of which suffices for Kant's argument. Proceeding directly through §§ 18, 20, 24, let him postpone the second part of § 24 and § 25 till he has read the concluding sections.

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scious only of a faculty of combining (synthesis), not of a subject exercising this faculty.

[1] Cf. my note on this numbering above. Mr. Meiklejohn numbers these § 6 and 11 respectively.

By this means he will greatly curtail his labour, and be better able to apprehend Kant's argument. I now proceed to accompany him through these sections in the order prescribed.

§ 15. If we look back to the exposition of § 10, we there see *synthesis*[1] put forth as the original and primary condition of knowledge, at first rudimentary and almost instinctive in its action, afterwards explicating itself into certain definite phases, or ways of combining, which Kant calls Categories. As his object at first is mainly to discover or determine the pure Categories, he passes over the earlier or undeveloped stage of synthesis, which is in existence and at work before we can form a concept, as its necessary condition. It is to this stage that Kant now turns his attention. It had been mistaken by some of his critics, and it had been asked whether the

[1] It may be asked why I have adhered to Kant's strange word *synthesis*, and not used the English word *combination*, which may mean the same thing. I have done so to avoid an important ambiguity, which Kant saw when he avoided the word *Verbindung*. Combination oftener means *the result of an act* (σύνθημα) of combining, than *the act itself* (σύνθεσις). This kind of ambiguity is common to *imagination*, *conception*, and many other such words. But nothing is more vital in this discussion than to hold fast that we are speaking of combination as an *act* or *function* of the understanding. This definite sense is exactly expressed by *synthesis*. Adhering strictly to this sense, the reader may substitute *combination*, or any other word he pleases.

Category of unity was not sufficient to account for the unity in objects of intuition. But, granting that our intuition is sensuous, or purely receptive, it is plain that representations are given us through it merely as such. Their form may also be *a priori* in us, and yet be nothing but the way in which we are affected. Neither of these can give us combinations of various representations [objects], for this is not an act of receptivity, but of spontaneity, and therefore the work of what we call the understanding, as opposed to sense. Whether we are conscious of it or not, whether the things combined be concepts, or sensuous intuitions, or pure intuitions, the *combination* is an act of the understanding, which Kant calls *synthesis*, indicating that this alone cannot be given by objects, but is the self-activity of the subject, and that we can represent nothing as combined in objects, which our understanding has not previously itself combined. Kant thinks it obvious that this act of the understanding is originally one and equivalent in all combinations,[1] and also the necessary condition of analysis.[2] It will be remembered that he spoke in the First Edition of the *identity of function* of the understanding, and also of the *unity of the action*, in this synthesis.

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[1] Cf. above, p. 180, note.

[2] He shows this in an ingenious note to § 16. My notion of *red* is obtained by *analysing* several red things, and abstracting the colour. But I cannot do this without presupposing red as an attribute already combined with others in this or previous representations. An attribute common to many different representations, implies that they each contain something different com-

But the very notion of such combination implies that variety is brought into *unity*, and this unity is a prior condition, not a result of the combination, which has no meaning without presupposing unity. We cannot, therefore, proceed to a judgment, or to a Category (such as that of unity), which is based on the power of judging, without presupposing this combination, or unity of given representations. We must therefore seek it at the very earliest stage of cognition. Let it be observed (§§ 10 and 19) that this unity is presupposed by all judgments, which are very inadequately described as the assertion of a relation between two concepts. In what does the relation consist? In nothing but reducing them to an unity, by means of this synthesis of which we are speaking. I may do this myself personally, in which case I call it a case of association, or may conceive it as being done by all mankind, in which case I call it a judgment of my perception, or a law of objects—in either case every judgment implies unity produced by this synthetical action of the understanding.

§§ 16, 17. Beyond the necessary reference of all

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bined with it. These, then, are synthetical unities, which must be presupposed before I can obtain an unity by analysis.

intuitions to space and time, they must be subject to another condition, viz., they must be present in our consciousness. There must be *a conscious I* to intuite them, or they are nothing. But this conscious I is not a receptive, but a spontaneous faculty, in short the faculty which combines them, as has just been explained. Furthermore, it is nothing but this consciousness of a combining faculty, the same in all acts of consciousness. This faculty Kant calls pure, or original apperception, since it is *a priori* and spontaneous. He also calls it the transcendental unity of self-consciousness, because this oneness of the conscious self is the source of *a priori* cognitions.[1] If representations could not be brought under the condition of being recognised as belonging to my single self-consciouness, they could not be considered as mine at all. The consciousness which merely accompanies different representations is fragmentary, and may be called empirical consciousness. But when I combine these various acts, and am conscious of this synthesis, then only do I become aware that my consciousness in them all was one, and identical. When I say then that all these representations belong to me, I mean this, and this only, that I am combining, or am able to combine them by this mental synthesis into one whole—the unity of self-consciousness, or, as Kant calls it, the synthetical unity of apperception. To say, therefore, that the understanding means the faculty of combining *a priori* our various representations under the unity of apperception (or consciousness), is to state an identical proposition, but it explicates our notion of pure consciousness, and shows that our identity of self cannot be thought without a synthesis of the variety given in intuition. These conditions are imposed on us because the faculty (intuition) which gives us multiplicity, and the faculty (self-consciousness) which gives us unity, are different in kind. If our understanding could intuite, then the multiplicity of intuitions or objects would be given directly in its representation, and it would not require the act of synthesis which our understanding, which only thinks, must perform. To us this condition is so necessary that we cannot even conceive an intellect directly intuiting, or even intuiting through other conditions than space and time, but if these other conditions made its intuition receptive, a synthesis similar to ours would still be required for the understanding attached to such an intuition.

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[1] See his explanation of transcendental above, p. 167.

When we speak of the understanding, or the faculty of *cognitions*, we regard the latter as referring to *objects*. But an object implies a group or combination of intuitions. This combination, as we have seen, can only be made by the synthesis of our consciousness. It follows that the unity of our consciousness is the necessary condition of our forming any notion of objects. Here is an illustration: mere space gives us no object, but only the materials for an object. In order to know *something in space*, as for example a line, I must *draw* it, and so produce a synthetical unity of parts. The unity of this act, as comprising several successive acts, is the unity of my consciousness, which gives me the notion of a line, and so only can I obtain such an object. The synthetical unity of consciousness is therefore an absolutely necessary, or objective condition of all cognition, for not only do I require it in order to know an object, but every intuition must come under it, before it can even become to me an object.

§ 18. This *transcendental unity* of apperception is (as we have said) the unity by means of which we combine the variety of intuition into the notion of *an object*. For this reason we call it *objective*, to contrast it with such *determinations of our internal sense* as are merely subjective and empirical, and therefore not necessary. Every man makes some of these combinations for himself *a posteriori*. But the pure form of intuition (given *a priori*), considered as mere presented variety, must stand under the original and primitive *I think*, which alone contains an objectively valid unity, viz., valid for every understanding. It is under this objective unity (§ 19) that intuitions are brought in the act of judgment. When we say body *is* heavy, we do not merely assert what seems to us by association subjectively combined, but we make an assertion which, whether true or false, is only possible by understanding what *necessary unity of apperception* is, and consequently bringing two representations under it. We assert these notions to be necessarily combined into unity, not in our empirical intuition, but by the synthesis of our perceptions in our pure consciousness.

Thus the first step in the Deduction has been reached. It has been shown that *objects* of intuition can only be obtained by a combination of multiplicity. This combination is not given in a sensuous intuition, which is pure receptivity. It is therefore added by the understanding, which is a faculty whose function is to combine. But all the several acts of combining are recognised by us as belonging to one and the same consciousness. The importance therefore of the unity of apperception, and its objective character, are manifest.

§ 20. But what have the Categories to do with this argument? What relation have they to the pure apperception? It is this. The intuitions can only be brought under it by the logical function of judging. Whatever variety therefore is given in intuition can only be brought under the pure apperception by being brought under one of the functions of judging (as exhibited in the table, p. 183). But the Categories are these very forms of judging, so far as they merely combine the variety of intuition (§ 13). This variety therefore stands under the Categories as various phases, or ways, of reducing them under the unity of apperception.

§ 21. We have now proved that the Categories, which arise in the understanding, quite apart from sensibility, can introduce unity into intuitions quite generally, for this might still be the case even were our faculty of intuition different from what it now is, provided it were receptive. We have not yet considered how empirical objects are actually given us, or whether we can identify the unities given in them with the unity imposed by the Category. When this is done, our deduction will be complete. But though we have hitherto abstracted from the way in which intuitions are given us, we could not abstract from the fact that they are *given to us*, that is, given from some other (here undetermined) source than our understanding, and independent of it. If our understanding possessed a power of intuiting, the Categories, which are mere acts of combining variety *given to it*, would be idle, for the objects would then be given directly to it in the act of intuiting. This peculiarity of our understanding, as opposed to an intuitive understanding, is, of course, a primitive fact, and inexplicable.

§ 22. But before we consider how empirical intuitions are given *to us*, as contrasted with other possible sensuous faculties of intuition, it is important to limit the other side of the process, and show that *the Category is of no use in cognising things, except* *when applied to objects of experience.* For *thinking* and *knowing* (cognising) *an object* are not the same. To know it, we want both a Category, or concept, and also an intuition, without which the former is mere form, or possibility of knowledge. But we can have none but *sensuous* intuitions either of pure space and time, or of sensations in space and time; and, moreover, the objects given by the former (mathematical figures) are mere forms, which do not prove the existence of things corresponding to them. *Things in space and time* must be representations accompanied by *sensations*, or empirical perceptions. Hence the Categories, even when applied to pure intuition, give us no knowledge of things, till we appeal farther to empirical intuition, or experience. Our assertion is therefore proved.

§ 23. It was easy to perceive the corresponding limitation in the case of space and time, for we cannot carry them beyond our senses. The pure Categories are not so restricted, and may apply to the objects of any *sensuous* [or receptive] intuition, whether it be in other respects like ours or not. But this extension proves vain. For beyond *our* sensuous intuitions they are mere empty forms of objects, since there is no actual intuition at hand, to which they can apply their synthesis to produce an unity of apperception, and this is the only function they can exercise. We can only then describe an object of an intuition different from ours by negative predicates, by judging, for example, that it is in space and time, or subject to change. But these negations contain no positive cognition whatever. And even if they did, we should still not have the least notion what Category to apply to such an object, for empirical intuition must determine this point also, as will appear when we consider the schematism.

§ 24. In this paragraph Kant comes to explain the office of the imagination, as intermediate between the pure understanding and the sensuous intuitions. He anticipates to some extent the schematism, but this is nevertheless requisite to the full comprehending of the Deduction. The pure Categories, referring to the combination of the data of intuition generally, are mere *forms of thought*, and not only transcendental, but purely intellectual. But as the form of sensuous intuition lies *a priori* within us, the understanding can act upon this, and through it upon sensuous intuitions. By this means the purely intellectual synthesis of the naked Category passes into an intuitible or figurative synthesis (*synthesis speciosa*), though still *a priori* and transcendental. Kant regards this latter synthesis as the work of the imagination, which therefore performs a transcendental synthesis, to be distinguished from that of the mere understanding. As reproductive of intuitions, it is indeed a faculty belonging to *sensibility*, but as exercising a spontaneity which actively determines intuitions in harmony with the Categories, it is allied to the understanding, and may be called the *productive* imagination, which performs a transcendental synthesis under the direction of the understanding.

Omitting for the present the Appendix to the Aesthetic here inserted by Kant, we proceed at once to the conclusion and summary of the whole deduction.

§ 26. In the *metaphysical Deduction* (or *exposition,* as he calls it in the Aesthetic), the *a priori* origin of the Categories was proved generally by their perfect coincidence with the general functions of thinking (§ 10). In the *transcendental* (§§ 20, 21) their possibility was shown as *a priori* cognitions of the objects of intuition generally—that is to say of any sensuous or receptive intuition. We now proceed to complete the Deduction by showing the possibility of cognising *a priori,* according to the laws of their combination, whatever objects can be presented *to our senses.* Our combination of variety in space and time, an act of the imagination, called by Kant (above, p. 223), *the synthesis of apprehension*, must obviously conform and correspond to the *forms* of space and time. But space and time are not mere forms of sensuous intuition, but themselves intuitions, that is to say, their variety is represented *a priori* as combined into *unity.* It appears then that *unity in the synthesis of variety,* both within us (in time), and without (in space), is given as the first condition of sensuous apprehension along with the very act. This can be no other unity than the combination of intuitions in general, which takes place in pure consciousness, according to the Categories, as above explained (p. 234); it is here applied to *sensuous intuitions*. As, therefore, experience is nothing but a knowledge of connected perceptions, and these are shown to stand under the condition of the Categories, the Categories are fully proved to be the conditions of the possibility of experience. Here are some examples: When I perceive a house, the *necessary unity* of space, and of my external intuition generally must be presupposed. It is in accordance with this that I as it were draw its figure, and separate it from surrounding perceptions.[1] This is the synthesis of apprehension. But abstracting from space, we find that the understanding exercises the same spontaneity more generally by the *synthesis of homogeneous parts* in any intuition, which is the Category of quantity. The former synthesis mustcorrespond with this latter.

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[1] That is to say, to perceive a house implies that we know it as a single object, separated from the surrounding perceptions given at the same time; also that it exists in space, in which the surrounding perceptions also exist. Two unities, the larger one of space, the lesser one of the house, are both implied in our knowledge of it as an object. Kant further states that we separate the house from its surroundings by a spontaneous act, which he calls drawing the figure, or mentally marking it out from the rest.

When I perceive the freezing of water, I apprehend two states of water standing in a time relation. But time is an *internal intuition* (as well as a form) with a necessary synthetical *unity* of parts, and the necessary condition of perceiving this relation. This is the synthesis of apprehension. But apart from time, the unity under which the understanding combines such varieties in intuition generally, is the Category of *cause*, which, when applied to my sensibility, determines all events in time according to its relation. Therefore the apprehension of the event, and therefore the event itself, stands under the relation of cause and effect.

The conclusion of the paragraph repeats the argument already (iii. pp. 206, 215) developed, that as the Categories prescribe laws for phenomena, or objects of nature (*materialiter spectata*), they must consequently legislate for the legitimacy or order of nature (*formaliter spectata*). There is no difficulty whatever in the argument, and as I have explained it already,[1] I shall not weary the reader with repetitions.

§ 27. We have come to the strange conclusion that for us no *cognition a priori* is possible, except *of objects of possible experience.* Yet though thus limited, it is nevertheless not borrowed from experience, but as regards both pure intuitions and pure Categories, found in us *a priori.* As therefore experience and the Categories are in harmony, and experience is not the ground of possibility of the Categories, the reverse must be the case. This Kant calls the *Epigenesis* of the pure reason, which begets the frame and order of nature by means of its Categories.

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[1] Above, p. 219.

Another alternative has been proposed : That we are so organized as to have subjective dispositions implanted in us, corresponding to the independent laws of nature. This is a sort of pre-established harmony. In the first place, Kant argues in reply, if we once begin to postulate such hypotheses, there is no limit to their farther use in explaining other difficulties. But it is still more decisive, that in such case the Categories must lack that *necessity*, which belongs to their very nature. He thinks that the law of Causality, for example, which asserts the necessity of certain consequences, would be false. For we should only be entitled to say: I am so constituted that I cannot think the effect and cause except thus conjoined. This is just what the sceptic wants, for then all our supposed objective judgments would be mere illusion, and when men were found, as there surely would, who denied the necessity, though they must feel it ; we could, at all events, never dispute with them about a matter depending on the peculiar constitution of their thinking subject.

* The reader will at once perceive the close analogy between this reply and that of Locke to the

idealist sceptics of his day [Locke's *Essay*, iv. 2, §14]. It is too, like that passage in Locke, one of the weakest passages in the great work of a great author. Surely if we are all agreed that the laws of nature are a mental relation superadded to the bare successive feelings given to our nerves of sense, then the only question which remains is this: did the mind impose them originally, or abstract them from repeated sensations? That there should be an unknown order of nature, in addition to and corresponding with the order which our understanding is, on either theory, competent to impose on its sensations—to require this is so perfectly otiose and gratuitous, as to be wholly inadmissible in any reasonable theory of human knowledge. We might as well assume a real space and time, after all the phenomena have been perfectly and adequately explained by the Kantian theory.

If the reader has been able to follow me through this long and intricate discussion, he has mastered perhaps the greatest difficulty in the Critick.

We may conclude this Chapter with an account of the supplement to his Aesthetic, which is inserted in the middle of the discussion on the Categories, in §§ 24, 25. 'This,' he says, 'is the place to explain the paradox which must have struck everyone in the exposition of the internal sense' (§ 6), where it is said, 'that our internal sense represents us to ourselves as phenomena, not as we exist *per se*,' in other words, that we only intuite our internal *affections*, not our internal being (self). As this puts us into a passive relation as regards ourselves, it has been usual to identify the faculty of *apperception* with the *internal sense*, whereas we distinguish them carefully.

In order to know ourselves, as in the knowledge of any other object, our understanding must employ its primitive faculty of combining the variety given in internal sense, and bringing it under the unity of apperception. We have seen that our understanding is not a faculty of intuiting, and must regard such a faculty, when acting in the sensibility, as a faculty differing from itself, and the variety given in it as a variety not obtained by its own direct action.[1] If, then, we turn our attention to the synthesis of the understanding, regarded purely by itself, it is nothing but the unity of the action, of which we are conscious even without sensibility, and which binds up the variety of sense, given internally, according to the form of internal intuition. So it is that our understanding, by a *transcendental synthesis of the imagination*, as it is called, being one of this subject's faculties, acts upon the passive subject, and thus affects the internal sense. Apperception and its unity, as the source of all combination, act upon all intuitions in general, under the title of Categories, before they act upon objects in sensuous intuition;

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[1] So I understand this very difficult sentence.

in other words, the unity of apperception is necessary to obtain the frame, or Category, which is logically prior to our knowledge of any object (whether internal or external) in this frame. The internal sense is the mere *form* of intuition, which does not give us a *definite* intuition, or object, till its variety has been combined by that transcendental action of the imagination above called the figurative synthesis.

We can easily observe this in ourselves. We cannot conceive a line, or circle, or other figure, without *drawing* it in thought, or conceive even time, without drawing its external image, a right line. This means that we direct our attention merely to the action of combining multiplicity, by which we determine our internal sense successively, and so observe the succession in that sense. This motion, as an act of the subject,[1] if we attend to the mere action, by which we determine *the internal sense* according to its form, is what produces in us the very notion of succession. The understanding does not *find* the combination in sense; but *produces* it by

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[1] Kant notices that the motion of an *object* in space belongs not to pure science, and therefore not to Geometry, as it requires experience to know that anything is moveable. But motion, as the act of drawing figures, which is presupposed by Geometry, is a pure act of successively combining multiplicity in external intuition generally by our productive imagination, it therefore takes its place even in transcendental philosophy.

acting upon sense. The difficulty as to how the thinking self can be regarded as different from the self-intuiting self, and yet identical with it, cannot be avoided or diminished by any other theory, if we regard ourselves (as we must) as objects of our own internal perception. That this latter is an intuition is plain, when we consider that the only image we can form of time, in which we represent ourselves, is a line in space, and that all measures in time are imaged by changes in external things, in fact, that the determinations of the internal sense in time are strictly analogous to those of the external in space. But we only intuite external objects, when we are affected through the external sense, we only intuite internal when we are affected through the internal sense, in other words, we know ourselves as phenomena in time, not directly, as to our real nature. Every act of *attention* gives us an example of this internal relation. Here anybody can perceive how his understanding, as an active faculty, determines his internal sense, as a passive state; in other words, we actively choose that our minds (here controlled as passive) shall attend to something different from the natural succession of ideas. § 25. But the phenomenal self given in internal intuition by the synthetical action of our understanding, is not the only datum we have. This very transcendental synthesis implies a consciousness, not of what we are, but *that we exist.* This representation we reach by *thought*, not by *intuition.* Now, every human *cognition,* or knowledge, requires (α) a combining action of the understanding, which unites (β) the multiplicity given in some kind of intuition. It follows that this consciousness that we exist, as it wants the second element, is not a cognition of itself. This self is indeed no phenomenon, far less an illusion, but can only become an object by an appeal to internal sense. All the thinking in the world, all the Categories, will not supply this element. I exist therefore as an intelligence, conscious merely of its faculty of combining, but subject to a limiting condition in the things combined, viz., that they must be obtained by the internal sense, and therefore in time. This time modifies all the data we receive through it, and thus makes them phenomena, that cannot inform us of things *per se.* To obtain these latter we should possess an intellectual intuition.

The *I think,* gives us the *act of determining* our own existence, but no *determination* of our existence. As I have no self-intuiting faculty, to intuite the subject, prior to its act of determining, like as we have a pure sensuous intuition in time, prior to objects in time, it is impossible for me to determine my existence, as a self-acting being. I represent myself, therefore, as spontaneous in thought, but with an existence determined only, as other phenomena are, sensuously. It is the consciousness of spontaneity, however, which enables me to call myself an *intelligence.*

* I cannot but think this long and difficult parenthesis has been one of the main reasons why the Deduction was not better understood. It really does not bear on the argument of the Deduction, but on the Aesthetic, and was inserted here, because Kant could not treat it till he had explained pure apperception and the transcendental synthesis of the imagination. It is a direct refutation of the theory lately propounded by Dean Mansel, that we are presented with ourselves directly, or intuitively, as substances, in contrast to the indirect presentation of external things through their attributes. I cannot but think that his theory shows how little Mansel had apprehended this part of the Critick, as he seems to have followed Kant pretty closely whenever he could understand him. It is bad enough to say that we have an intuition of self, when, as a matter of fact, we cannot make a single assertion about the intuition, or explain it, but merely reiterate the assertion—unmeaning in itself—for the sake of a philosophical theory. But surely the further collocation of words, 'intuiting ourselves as substance,' might have made Mansel pause. How is it conceivable that we should intuite substance, as distinguished from its attributes? Surely if such a thing were conceivable, the substance which we postulate for external things would not be such an utterly negative, inconceivable representation? In a private communication to me, as regards this criticism, he

defended himself by saying, that if we were conscious of self as a cause, which Kant has explained just now, we must necessarily be conscious of ourselves as substance, as substance and cause are in this case identical. I hold, on the contrary, that we may be conscious of causation, or action, without knowing anything more of the substance which is the subject of the action. I hold the present case to be a very striking one of this fact. The ultimate appeal is, as I suppose, to each man's consciousness, and in this appeal I am confident the great majority of my readers will agree with the great majority of modern philosophers, who, whenever they have avoided amplifications of language, and stated the facts clearly, have plainly denied the immediate presentation of self as a substance.

CHAPTER X.

THE TRANSCENDENTAL ANALYTIC, BOOK II. THE ANALYTIC OF PRINCIPLES.

GENERAL Logic is built on a basis agreeing perfectly with the higher faculties of knowledge, which are *understanding*, [the faculty of] *judgment*, and *reason*. We have accordingly the doctrine of *concepts*, *judgments*, and *syllogisms* arranged on this plan. As this formal Logic merely discusses the form of thinking, it can even comprise in its Analytic the canon of the reason, for this faculty, apart from the peculiar nature of the cognitions used, must have its proceedings prescribed and fixed.

Transcendental Logic, which is limited to a definite content, viz., pure *a priori* cognitions, cannot follow in its wake. For it appears that the transcendental use of Reason is not objectively valid, and so not the *Logic of Truth*, or Analytic, but occupies, as a *Logic of illusion*, a separate place, under the title of *transcendental Dialectic*. It is then Understanding and Judging only that have a canon of their objectively valid use in Transcendental Logic. The

Analytic of Principles is simply a canon for the proper use of the *faculty of judgment*, and teaches it to apply to phenomena the Categories, which contain the *a priori* conditions for rules. Taking then the proper principles of the understanding for his subject, Kant indicates his scope by the title *Doctrine of the Faculty of Judging.*

INTRODUCTION. *Of the transcendental Faculty of Judgment generally.*[1]

If the understanding be the faculty of rules, the judging faculty is the power of *subsuming* under rules, or distinguishing whether a given case comes under the rule. General Logic cannot possibly give any rules for this faculty. For as Logic abstracts altogether from the *content of knowledge*, and adheres to the pure form only, were we to attempt to show generally what should come under its general rules, this could only be done by another general rule, and the application of *this* would raise the same difficulty. The faculty of judging is then a special talent, which can be practised, but not instructed. It is, in fact, that mother-wit, which no schooling can replace, for even though we cram our minds with any quantity of rules derived from other sources, the faculty of using them must belong to ourselves naturally, and no learning can cure stupidity. But it is very useful to exercise this faculty by examples, especially as they seldom conform exactly to the rule, and so teach us to apply it in a wider sense; from this point of view they are specially requisite to men whose natural talent for judging is weak.

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[1] The reader will observe that throughout this Chapter Kant uses the word 'judgment' in a sort of practical every-day sense, not merely as the general faculty of comparing representations. In this latter sense he stated above (p. 178), 'that judging and thinking were coextensive.' He now uses it as we do, when we speak of a 'man of judgment,' viz., a man who knows how to apply his principles, or bring (subsume) particular cases under the right principles. This ambiguity was first noticed by Dr. Toleken.

We have seen above that *general Logic* can prescribe no rules for the faculty of judgment. It is so very different a case with transcendental Logic, that it appears to be its special business to direct and secure the use of the pure understanding by fixed rules. For in obtaining extension for our field of knowledge *a priori*, or as *Doctrine*, to use Kant's word, philosophy appears ill equipped, and has done nothing; but as *Critick*, to prevent errors of judgment in the few pure concepts that we possess—in this negative duty it must exercise all its skill and acuteness.

But transcendental philosophy has this peculiarity, that beyond the rule (or better, the general condition of rules) given in the Categories, it can also show *a priori* the case, to which the rule should be applied. It shares this advantage with Mathematic alone of other sciences, because it treats of concepts which are to refer *a priori* to objects; consequently its objective validity, as well as the general conditions under which objects can be given, in conformity with these Categories, can only be shown *a priori*. Were this not done, they would be mere logical forms, and not Categories. Our *transcendental theory of judging* contains two parts—first, the *Schematism*, treating of the sensuous condition, under which Categories must be used; secondly, the *Principles* of the pure understanding, or the synthetical judgments, which flow from the Categories under these conditions, and lie *a priori* at the basis of all the rest of our knowledge.

THE TRANSCENDENTAL THEORY OF JUDGING, OR ANALYTIC OF PRINCIPLES. CHAP. I.

Of the Schematism of the Pure Understanding.—Whenever we *subsume* an object under a concept, the two representations must be *homogeneous*, as a matter of course. Thus the concept of a plate is homogeneous with the purely Geometrical notion of a circle, for the roundness thought in the former, can be intuited in the latter. But the pure Categories are completely heterogeneous from all sensuous intuitions. How then can the latter be subsumed under the former, and how is, consequently, the *application* of the Categories to objects of sense possible? For surely none will assert that any Category, such as *Causality*, can be intuited in phenomena and contained in them. Here then the necessity of the Theory of Judgment, or applicability of the *pure Categories* to experience becomes apparent. In other sciences, this divergence between the general concepts and their concrete representation does not exist. There must obviously be something intermediate, homogeneous on the one hand with the Category, on the other with the phenomenon, and this must make the application possible. This mediating representation must be *pure*, and yet not only *intellectual* but *sensuous*. We shall call it the *transcendental schema.*

We saw that the concept of the understanding produces pure synthetical unity of various parts generally. Now time, as the formal condition of the variety given in internal sense, and so of the combination of all our representations, also affords us an *a priori* multiplicity in pure intuition; that is to say, the (pure) times, in which a series of various representations are given and combined by the mind may themselves be regarded as an *a priori* multiplicity, combined, or combinable *a priori* into a pure unity. Therefore a transcendental *determination* of time must have this in common with the *Category* (which brings this time-determination into unity), that it is *universal*, and depends on an *a priori* rule. But, on the other hand, it is also in conformity with the *phenomenon*, inasmuch as time is contained in every empirical representation of variety. Here then we have the schema we require. The deduction has already taught us that the Categories are only applicable to objects of experience, as distinguished from things *per se;* that they consequently must require modifications of our sensibility, and this implies that formal conditions of sense (especially internal sense) are also necessary, as a condition under which alone we can apply the Category to an object. This last condition is the schema of the Category, and the proceeding of the understanding as regards these schemata we call the *schematism* of the pure understanding.

The schema in itself is indeed, like the image, the product of our imagination, but also differs in not being an individual picture, as it merely aims at representing the general way in which the unity of intuition is produced. Thus I can place five points together thus ....., and they produce a picture of *one number* 5. But when I think of what *number in general* means, I have before me the peculiar way in which the imagination proceeds to form such an arrangement of points. 'When we represent to ourselves the general procedure of the imagination, in procuring an image for a concept, I call this the schema belonging to this concept.'

* The illustration used by Kant shows that he was a Conceptualist, as regards the object of the mind in part at least of its thinking concerning general ideas, as they were called by the schoolmen.

It also shows that, as usual, he took a deeper and fuller view of the mental state which was once the subject of such bitter controversy. Locke's abstract idea of a triangle, which had roused the ire and the laughter of so many critics, is here shown to be not only free from absurdity, but even the truest account of the matter contained in any previous philosophy. But Locke's fault had been to attend to the unimportant part of the process. It is the *act* of the mind in putting together the image of a triangle, not the completed *image*, which affords us the proper object in general thinking.[1] For the actual images are in every case different, and even inconsistent, but the act of making them in general, is one and the same in all cases. It is what Kant calls a 'unity of action.' 'In fact,' he says, 'not images, but schemata, lie at the basis of our pure sensuous concepts. No image could ever be adequate to the general concept of a triangle, as it cannot embrace right-angled, scalenon, &c. The schema of a triangle can exist in thought only, and means a rule of the synthesis of the imagination, when applied to pure objects in space.' The same is the case with empirical concepts. My notion (schema) of a dog means a rule followed by my imagination in drawing the general features of a certain quadruped, without confining myself to any particular figure.

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[1] On this view of the schema as an act, cf. the *Critick*, pp. 110, 435.

This schematism of the understanding, as regards the pure form of objects, is a hidden craft in the secrets of the human mind, which we can hardly expect ever plainly to discover and to expound. But so much seems certain: the *image* is the product of the empirical working of the productive imagination; the *schema* of sensuous concepts, such as figures in space, is as it were a sketch (*monogram*) of the pure imagination *a priori*, through which alone images can be brought into agreement with the concept. The schema of a pure concept of the understanding (Category), on the contrary, can never be reduced to an image, but is only a pure synthesis, according to a rule of unity supplied and expressed by the Category. This schema is, of course, a transcendental product of imagination, affecting the determining of our internal sense generally, as to its form—Time. It produces that unity expressed by the concept, which is a phase of the transcendental unity of apperception. Let us proceed to illustrations.

The pure image of all quantities (*quanta*) in external sense is space, for all objects of the senses generally, it is time. But the pure *schema* of quantity [*quantitas*], as a Category, is *number*, or the successive addition of homogeneous units. The act of numbering is nothing but the unity of combining the variety of a homogeneous intuition; in fact, I generate time itself in the successive apprehending of my intuition. Kant here means that the Category of unity is exemplified or imitated by the mind considering the perception in a single act, or moment of time, to indicate unity. The Category of Plurality is exemplified by the mind requiring several successive moments to apprehend a perception, of which the parts are separate but homogeneous, and therefore the several acts appear as separate units. Totality implies the adoption of a large unit, under which many smaller are combined.

Reality in the Category is that which corresponds to sensation generally, that of which the concept indicates existence in time, as opposed to Negation, or non-existence in time. Their opposition is therefore that of the same time full (of sensation) and empty. 'As time is only the form of intuition, or of objects as phenomena, that which in these phenomena corresponds to sensation is the transcendental matter of all objects, as things *per se*, in fact their *reality*.'[1] We must judge of this reality by the amount of sensation produced upon us. But every sensation has a degree, or quantity, by which it can affect our faculty of representation during the same length of time, more or less, varying from the maximum of sensation down to its complete absence, or *negation.* Thus a continuous transition from reality to negation is possible, which enables us to regard every reality as a *quantum* (of sensation). The schema of a reality, in this sense, is its continuous and uniform generation in time, when we pass from total absence of sensation in time to some particular degree of sensation. As we before had several successive homogeneous perceptions in successive moments, giving us number, so we must here suppose several successive perceptions homogeneous in their character, but differing in the increasing intensity of the sensation they produce. Kant considers that we must conceive the maximum of sensation as made up of all the lesser degrees which we could apprehend successively in time. But as the sum of them is given to us in an equally short time as each of the lesser degrees, we come to know the difference between the same subdivision of time as either full or empty. So it is that an object which affects even three different senses together has more reality than an object which affects only one. The moment in which it affects us is a full time, and the fulness may be measured by three times of equal length, each filled by one of the sensations. The same fact is implied when we speak of one object being ten shades darker than another of the same kind. Quality is, after all, a quantity of reality.

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[1] This statement, occurring in the first Edition, as well as the succeeding ones, is a strange way of preaching the absolute idealism which Schopenhauer and Fischer ascribe to Kant! He regards sensation here as directly suggesting something apart from our cognition, though we have no means of studying it save through our sensation.

'The schema of substance is the permanence of the real in time, or the representation of it, as the substratum of an empirical time-determination generally, which remains, while all else changes. Time does not elapse, but rather the existence of changeable things elapses in it.' Consequently substance, or the permanent in existence, is what corresponds in phenomena to time, itself unchangeable and permanent. It is therefore by substance alone that we can determine sequence and co-existence of phenomena in time.[1] The schema of Causality consists in the succession of various phenomena, so far as it is subject to a rule. The schema of community or reciprocal causation of substances as regards their accidents, is the necessary simultaneity of the determinations of both. The schema of possibility is the agreement of our synthesis of various representations with the conditions of time generally. For example, contradictory attributes can only exist in a thing successively, consequently possibility determines the existence of a thing at some time. The schema of actuality is its existence at a definite time; that of necessity its existence at all times.

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[1] As he tells us afterwards that impenetrability is the empirical criterion of substance (p. 169, Ed. Bohn), we may take this as a specimen of a permanent reality (of sensation), which remains the same, and so enables us to determine changes in other qualities. So the chameleon remains a solid body while its colours change, and we accordingly talk of its substance remaining the same, while its accidents vary. But were there not a permanent phenomenon of some kind, corresponding to the general lapse of time, we should not know that other sensations occupied shorter time, and changed while the cause of them is conceived unchangeable. I may add, that these illustrations of the various schemata are developed and explained by the succeeding chapters on the Principles which embody them, and that it is impossible to make them clear to the reader till he has studied the theory of the Principles.

We can now see the relation of all the schemata. That of quantity is the putting together (synthesis) of portions of time, in our successive apprehension of an object or objects. That of quality is the putting together of (feebler) sensations in time, or filling time with them. The schema of relation is the attitude of perceptions to one another in all time (either as transient and permanent, as necessarily consequent, or as necessarily simultaneous). The schema of modality represents to us time itself, regarded generally as the correlate for determining an object, when we consider how or whether it belongs to time. The schemata affect therefore respectively *a priori*, and according to rules, 1. the succession of time; 2. the content of time; 3. the order of time; and 4. the sum total (*Inbegriff*) of time, as regards all possible phenomena.

Kant concludes the discussion by reiterating what he had said above (§§ 22–3), as to the use of the Categories being only empirical, and that they have no meaning except as applied to objects of sense. The discussion of the schematism has shown this more plainly, in that it proves that the transcendental synthesis of the imagination is wholly employed in *time* and its determinations. The schema is only the sensuous concept of an object in accordance with the Category. If we lay aside this restriction, the Category preserves nothing but a logical meaning, and can determine no object, not to say a thing *per se*.

It will tend to put this schematism as well as the deduction of the Categories in a clearer light, if we consider Schopenhauer's criticism, which at first sight appears somewhat plausible. Kant's plan (he tells us) was to find for every empirical[1] function of the understanding its transcendental parallel. Now when we use a very abstract empirical concept symbolically (as Leibnitz would say), we often glance back towards the empirical intuitions from which we have obtained the concept, and we call up in imagination a sort of imperfect image momentarily, merely to assure ourselves that our thinking is possible in intuition—a psychological fact which any one will discover for himself easily by reflection. This fugitive phantasm, intermediate between abstract concepts, and clear intuitions, Kant called a schema, and thence concluded that between the pure intuitive faculty of sensibility and the pure faculty of thought there are similar schemata of the pure

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[1] He should have said *logical*, when he refers to Kant.

Categories. But what is the use of this schematism in empirical thinking? Merely to secure that the *content* of the concept be correct. The matter has been abstracted from empirical intuition: we refer to it occasionally, to make sure that our thinking is about *reality*. But Schopenhauer objects that the pure *a priori* concepts come from within, and are not derived from intuition; hence, such concepts cannot be referred to any intuition to guarantee their reality. It was, then, upon the misapplication of this psychological fact above mentioned, that Kant based his elaborate schematism of the pure understanding.

Although Schopenhauer's criticism is unsound, it has been here stated, as the refutation of it will bring the real doctrine of Kant into a clearer light. Schopenhauer has well described the 'abstract idea' of Locke as a fugitive phantasm, which gives reality to our symbolical concepts. What is the exact office of this schema? To insure to us that our (empirical) concepts are applicable in experience; to show us that they are not merely logically possible, but objectively real. Now, in empirical concepts this requirement is satisfied, if the content of the concept answers to the schema, as the law of contradiction secures its possibility, or logical correctness. But all our objects of experience stand not only under representative concepts (genus, species, &c.), but also under assertative concepts (substance, cause, &c.).

These are the Categories, which were already proved to be part of the (transcendental) content of representations. Hence, such concepts must be shown to be applicable to objects of experience just as generic concepts are. These latter establish their claim by means of the schema just mentioned—how can the Categories do so?

Let us look back to the deduction of the Categories. All phenomena were found to agree in one point at all events—they must be *my* phenomena. It is this unity which makes us speak of Nature as a unity, and yet as consisting of many lesser units, called objects. For there is no unity in our experience except what is imposed by our minds. Accordingly this highest and most general synthetical unity of consciousness acts upon phenomena by imposing upon them various phases of its unity, various lesser unities, all dependent upon the highest synthetical unity. These lesser unities are the Categories. They are imposed by the mind upon phenomena, which thus become objects. But how? The sensations which are the component elements of the object, being received into the mind successively, are reproduced, but not simply; the imagination moulds them, and so produces, not only the received phenomena, but also the form of a concept along with them; so that, owing to this addition (which is the transcendental content of the representation), that faculty is properly called *productive.* But what is the form added to the received

KANT'S

CRITICAL PHILOSOPHY

FOR ENGLISH READERS.

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A·D·1591

VOL. III.

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KANT'S

PROLEGOMENA TO ANY FUTURE METAPHYSIC
WHICH CAN CLAIM TO BE A SCIENCE.

PREFACE.

THE following translation of Kant's *Prolegomena to any Future Metaphysic* is not the first which has been laid before the English public. Richardson published a translation in 1818, which is now so rare that Mr. Lewes, though his knowledge of this sort of literature is exceedingly wide, appears unaware of its existence.[1] When I had completed part of the task, I chanced to find a copy of this book, which is full of errors and inaccuracies, but yet has merit enough to have escaped oblivion, had the author published it at a time when anything whatever was known in England about Kant's philosophy. I was tempted to use it in some sections as the basis of the present work, in order to relieve myself of the tedium of writing out the whole translation. But so many corrections were necessary, that it hardly saved me any trouble, and probably my book may not have been improved by putting the new wine into the old bottles. Still I am answerable for the general correctness of the following translation, and believe that, clumsy as it may be, it is far more readable than Kant's original. There are at least twice as many full stops as in the German; sundry missing verbs and pronouns have been supplied, and I have done what I could to make the terms more precise without damaging the faithfulness of the reproduction.

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[1] *Hist. of Phil.* ii., p. 441, *note.*

It would perhaps be possible, by going over the work an endless number of times, to dissect all the involved sentences, and ultimately to reduce it to a readable compendium. But the result would not be worth the labour, and Kant hardly deserves to have his capital fault extenuated at other people's expense. Any student really interested in the subject will find nothing very difficult in this version as it now stands.

I need say nothing here of the scope of the

Prolegomena, as Kant himself has explained it in his Introduction, but lay special stress on the fact, that while prior in time to the Second Edition of the *Critick*, and professedly expounding the First Edition, its attitude is completely that of the Second Edition on the great question of idealism. When Schopenhauer's school talk of Kant's supposed change of opinion between 1781 and 1787, they should be reminded that in 1783 he wrote the *Prolegomena*, not to refute, but to explain his original *Critick*, and that in no work has he spoken out more precisely against absolute idealism.

Most of the terms used do not require any special explanation, but the following points may be worth noticing. As in a previous work, *knowledge* and *cognition* are both used, and used synonymously, on account of the convenience and precision of the forms *cognitive* and *cognise*, while the Saxon word is clearer to most readers. I have frequently printed the word *Reason* with a capital, where it means a special faculty, as distinguished from the understanding, but as Kant himself often passes back to the wider meaning, it was impossible to distinguish all the individual occurrences of the more special meaning and to do more than call attention to the distinction. In the case of another word I have taken a liberty which appears to be an improvement on the original. While Kant uses *Begriff* as synonymous with our *concept*, he also uses it for those vaguer mental representations which are under no category, as for example, God and Infinity. In these cases I have used the word *notion*, as being vaguer than *concept*, and may call the reader's attention to the curious fact, that the Germans are not supplied with a special word to indicate a vaguer thought than a concept. Kant's *Vorstellung* includes intuitions, his *Idee* has a quite special meaning.

Apart from nomenclature, I have in many places endeavoured to bring out the point of the argument, by trifling additions or modifications—so trifling that they will not appear without a careful comparison with the original. It was indeed suggested to me in some of these places to translate quite literally, and leave the reader to solve the difficulty left by Kant. But I venture to hope that in none of them has the sense of the original been changed, and it is better to run the risk of a mistake, than to put down anything that does not convey a distinct idea to the reader's mind. It is of course far more agreeable to paraphrase than to translate, and as the *Critick* is accessible in English, I adopted this course in the former two volumes, but it is due to Kant to put his *Prolegomena* in all their homeliness literally before the reader, that he may judge of the accuracy of the various commentators and critics who discuss it.

I have revised and reprinted in the Appendix the suppressed passages of Kant's First Edition of the *Critick*, which were formerly appended to Kuno Fischer's *Commentary*. These passages are of the highest importance, and not elsewhere accessible to the readers for whom the present Commentary is intended. Some errors and obscurities in them have been removed; and, indeed, on revising these appendices, I found so many imperfections, that I cannot hope the present translation is free from them. The very effort to make the meaning plain, rather than to render the original slavishly, *verbum verbo*—this very effort may lead to errors. The candid reader will therefore vouchsafe me indulgence, and excuse these dry but necessary explanations.

TRINITY COLLEGE, DUBLIN,
May 10*th*, 1872.

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KANT'S

PROLEGOMENA TO ANY FUTURE METAPHYSIC.

INTRODUCTION.

THESE Prolegomena are for the use, not of pupils, but of future teachers, and are intended to serve even the latter, not in arranging their exposition of an existing science, but in discovering this science itself.

There are learned men, to whom the history of philosophy (both ancient and modern) is philosophy itself; for such the present Prolegomena are not written. They must wait till those who endeavour to draw from the fountain of reason itself have made out their case; it will then be the historians' turn to inform the world of what has been done. Moreover, nothing can be said, which in their opinion has not been said already, and indeed this may be applied as an infallible prediction to all futurity; for as the human reason has for many centuries pursued with ardour infinitely various objects in various ways, it is hardly to be expected that we should not be able to match every new thing with some old thing not unlike it.

My object is to persuade all who think Metaphysic worth studying, that it is absolutely necessary to adjourn for the present this (historical) labour, to consider all that has been done as undone, and to start first of all with the question, 'Whether such a thing as metaphysic be at all possible?'

If it be a science, how comes it that it cannot, like other sciences, obtain for itself an universal and permanent recognition? If not, how is it ever making constant pretensions, under this supposition, and keeping the human mind in suspense with hopes that never fade, and yet are never fulfilled? Whether then, as a result, we demonstrate our knowledge or our ignorance, we must come once for all to a definite conclusion about the nature of this pretended science, which cannot possibly remain on its present footing. It seems almost ridiculous, while every other science is continually advancing, that in this, which would be very Wisdom, at whose oracle all men inquire, we should perpetually revolve round the same point, without gaining a single step. And so its followers having melted away, we do not find men who feel able to shine in other sciences venturing their reputation here, where everybody, however ignorant in other matters, pretends to deliver a final verdict, as in this domain there is as yet no certain weight and measure to distinguish sound knowledge from shallow talk.

But after long elaboration of a science, when men begin to wonder how far it has advanced, it is not without precedent that the question should at last occur, whether and how such a science be even possible? For the human reason is so constructive, that it has already several times built up a tower, and then razed it to examine the nature of the foundation. It is never too late to mend; but if the change comes late, there is always more difficulty in setting it going.

The question whether a science be possible, presupposes a doubt as to its reality. But such a doubt offends the men, whose whole possessions consist of this supposed jewel; hence he who raises the doubt, must expect opposition from all sides. Some, in the proud consciousness of their possessions, which are ancient, and therefore considered legitimate, will take their metaphysical compendia in their hands, and look down on him with contempt; others, who never see anything except it be identical with what they have seen before, will not understand him, and everything will remain for a time, as if nothing had happened to excite the concern, or the hope, for an impending change.

Nevertheless, I venture to predict, that the independent reader of these Prolegomena will not only doubt his previous science, but ultimately be fully persuaded, that it cannot exist without satisfying the demands here stated, on which its possibility depends; and, as this has never been done, that there is, as yet, no such thing as Metaphysic. But as it can never cease to be in demand:—

> 'Rusticus expectat, dum defluat amnis, at ille
> Labitur et labetur in omne volubilis aevum;'

since the interests of mankind are interwoven with it so intimately, he must confess that a radical reform, or rather a new birth of the science after an original plan, must be unavoidably at hand, however men may struggle against it for a while.

Since the Essays of Locke and Leibnitz, or rather since the origin of metaphysic so far as we know its history, nothing has ever happened which might have been more decisive to the fortunes of the science than the attack made upon it by David Hume. He threw no light on this species of knowledge, but he certainly struck a spark from which light might have been obtained, had it caught a proper substance to nurture and develop the flame.

Hume started chiefly from a single but important concept in Metaphysic—that of Cause and Effect (including the deduced notions of action and power). He calls on reason, which pretends to have generated this notion from itself, to answer him with what right it thinks anything to be so constituted, that if granted, something else must necessarily be granted thereby; for this is the meaning of the concept of cause. He demonstrated irresistibly, that it was perfectly impossible for reason to think such a combination by means of concepts and *a priori*—a combination that contains necessity. We cannot at all see why, in consequence of the existence of one thing, another must necessarily exist, or how the concept of such a combination can arise *a priori*. Hence he inferred, that reason was altogether deluded by this concept, which it considered erroneously as one of its children, whereas in reality the concept was nothing but the bastard offspring of the imagination, impregnated by experience, and so bringing certain representations under the Law of Association. The subjective necessity, that is the custom which so arises, is then substituted for an objective necessity from real knowledge.[1] Hence he inferred that the reason had no power to think such combinations, even generally, because its concepts would then be mere inventions, and all its pretended *a priori* cognitions nothing but common experiences marked with a false stamp. In plain language there is not, and cannot be, any such thing as metaphysic at all.[2] This conclusion, however hasty and mistaken, was at least founded upon investigation, and the investigation deserved to have suggested to the brighter spirits of his day a combined attempt at a happy solution of the problem proposed by him, if such solution were possible. Thus a complete reform of the science must have resulted.

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[1] Lit. insight. M.

[2] Nevertheless Hume called this very destructive science metaphysic, and attached to it great value. 'Metaphysic and morals (he says in the 4th part of his Essays) are the most important branches of science; mathematics and physics are not

But the perpetual hard fate of metaphysic would not allow him to be understood. We cannot without a certain sense of pain consider how utterly his opponents, Reid, Oswald, Beattie, and even Priestley, missed the point of the problem. For while they were ever assuming as conceded what he doubted, and demonstrating with eagerness and often with arrogance what he never thought of disputing, they so overlooked his indication towards a better state of things, that everything remained undisturbed in its old condition.

The question was not whether the concept of cause was right, useful, and even indispensable with regard to our knowledge of nature, for this Hume

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worth half so much.' But the acute author was here merely regarding the negative use arising from the moderation of the extravagant pretensions of speculative reason, and the complete settlement of the many endless and troublesome controversies that mislead mankind. He overlooked the positive injury which results, *if* the reason be deprived of its most important prospects, *which can alone supply to the will the highest aim of all its* efforts.

had never doubted. But the question to which Hume expected an answer was this, whether that concept could be thought by the reason *a priori*, and whether it consequently possessed an inner truth, independent of all experience, and therefore applied more widely than to the mere objects of experience. It was surely a question concerning the *origin*, not concerning the *indispensable use* of the concept. Had the former question been determined, the conditions of the use and valid application of the concept would have been given *ipso facto*.

But the opponents of the great thinker should have probed very deeply into the nature of the reason, so far as it concerns pure thinking, if they would satisfy the conditions of the problem—a task which did not suit them. They therefore discovered a more convenient means of putting on a bold face without any proper insight into the question, by appealing to the *common sense of mankind*. It is indeed a great gift of God, to possess right, or (as they now call it) plain common sense. But this common sense must be shown practically, by well-considered and reasonable thoughts and words, not by appealing to it as an oracle, when you can advance nothing rational in justification of yourself. To appeal to common sense, when insight and science fail, and no sooner—this is one of the subtile discoveries of modern times, by means of which the most vapid babbler can safely enter the lists with the most thoroughgoing thinker, and hold his own. But as long as a particle of insight remains, no one would think of having recourse to this subterfuge. For what is it, but an appeal to the opinion of the multitude, of whose applause the philosopher is ashamed, while the popular and superficial man glories and confides in it? I should think Hume might fairly have laid as much claim to sound sense as Beattie, and besides to a critical understanding (such as the latter did not possess), which keeps common sense within such bounds, as to prevent it from speculating, or, if it does speculate, keeps it from wishing to decide, when it cannot satisfy itself concerning its own principles. By this means alone can common sense remain sound sense. Chisels and hammers may suffice to work a piece of wood, but for steel-engraving we require a special instrument. Thus common sense and speculative understanding are each serviceable in their own way, the former in judgments which apply immediately to experience, the latter when we judge universally from mere concepts, as in metaphysic, where that which calls itself (often *per antiphrasin*) sound common sense has no right to judge at all.

I honestly confess, the suggestion of David Hume was the very thing, which many years ago first interrupted my dogmatic slumber, and gave my investigations in the field of speculative philosophy quite a new direction. I was far from following him in all his conclusions, which only resulted from his regarding not the whole of his problem, but a part, which by itself can give us no information. If we start from a well-founded, but undeveloped, thought, which another has bequeathed to us, we may well hope by continued reflection to advance farther than the acute man, to whom we owe the first spark of light.

I therefore first tried whether Hume's objection could not be put into a general form, and soon found that the concept of the connexion of cause and effect was by no means the only one, by which the understanding thinks the connexion of things *a priori*, but rather that metaphysic consists altogether of such connexions. I sought to make certain of their number, and when I had succeeded in this to my expectation, by starting from a single principle, I proceeded to the deduction of these concepts, which I was now certain were not deduced from experience, as Hume had apprehended, but sprang from the pure understanding. This deduction, which seemed impossible to my acute predecessor, which had never even occurred to any one else, though they were all using the concepts unsuspiciously without questioning the basis of their objective validity—this deduction was the most difficult task ever undertaken in aid of metaphysic. More especially, no existing metaphysic could assist me in the least, because this deduction must prove the very possibility of metaphysic. But as soon as I had succeeded in solving Hume's problem not merely in a particular case, but with respect to the whole faculty of pure reason, I could proceed safely, though slowly, to determine the whole sphere of pure reason completely and from general principles, in its limits, as well as in its contents. This was what metaphysic required, in order to construct its system safely.

But I fear that the *carrying out* of Hume's problem in its widest extent (viz. my Critick of the Pure Reason) will fare as the *problem* itself fared, when first proposed. It will be misjudged, because it is misunderstood, and misunderstood, because men choose to skim through the book, and not to *think* through it—a disagreeable task, because the work is dry, obscure, opposed to all ordinary notions, and moreover voluminous. I confess however I did not expect to hear from philosophers complaints of want of popularity, entertainment, and facility, when the existence of a highly esteemed and to us indispensable cognition is at stake, which cannot be established otherwise than by the strictest rules of scholastic accuracy. Popularity may follow, but is inadmissible at the commencement. Yet as regards a certain obscurity, arising partly from the extent of the plan, in which the principal points of the investigation cannot be easily gathered into view, the complaint is partly just, and I intend to remove it by the present Prolegomena.

The work which represents the pure faculty of reason in its whole compass and limits, will always remain the groundwork, to which the Prolegomena, as a preliminary exercise, refer; for we must have that Critick completed as a science, systematically, in its minutest details, before we can think of letting Metaphysic appear on the scene, or even have the most distant hope of attaining it.

We have been long accustomed to seeing antiquated knowledge produced as new, by being taken out of its former context, and fitted into a suit of any fancy pattern, under new titles. Most readers will set out by expecting nothing else from the Critick; but these Prolegomena may persuade him that it is a perfectly new science, of which no one has ever even thought, the very idea of which was unknown, and for which nothing hitherto accomplished can be of the smallest use, except it be the indication suggested by Hume's doubts. Yet even he did not suspect such a formal science, but ran his ship ashore, for safety's sake, on scepticism, there to let it lie and rot; whereas my object is rather to give it a pilot, who, by means of safe astronomical principles drawn from a knowledge of the globe, and provided with a complete chart and compass, may steer the ship safely, whither he listeth.

If we proceed to a perfectly isolated and peculiar new science, with the presupposition that we can judge it by means of a supposed science that has been already acquired, whereas the reality of this latter must be first of all thoroughly questioned—if we do this, it will make men think they merely recognise old knowledge. For the terms are similar, with this difference, that everything must appear distorted, absurd, and unintelligible, because men start from a mental attitude not the author's, but their own, which through long habit has become a second nature. But the voluminous character of the work, so far as it depends on the subject, and not the exposition, its consequent unavoidable dryness, and its scholastic accuracy—these are qualities which can only benefit the science, though they may damage the book.

Few writers are gifted with the subtilty, and at the same time with the grace of David Hume, or with the depth, as well as the elegance, of Moses Mendelssohn. Yet I flatter myself I might have made my own exposition popular, had my object been merely to sketch out a plan, and leave its completion to others, instead of having my heart in the welfare of the science that I had so long pursued;[1] in truth, it required no little constancy, and even self-denial, to postpone the sweets of an immediate success to the prospect of a slower, but more lasting reputation.

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[1] It is not a little remarkable that Kant expresses an exactly contrary opinion in the conclusion to his Second Preface to the Critick, where he invites those who are possessed of the gift of popular teaching to assist in explaining his system, and where he confesses himself devoid of it.—*Critick, &c.*, p. xlii. M.

Making plans is often the occupation of a luxurious and boastful mind, which thus obtains the reputation of a creative genius, by demanding what it cannot itself supply; by censuring, what it cannot improve; and by proposing, what it knows not where to find. And yet something more should belong to a sound plan of a general Critick of the Pure Reason than mere conjectures, if this plan is to be other than the usual declamation of pious aspirations. But pure reason is a sphere so separate and self-contained, that we cannot touch a part without affecting all the rest. We can therefore do nothing without first determining the position of each part, and its relation to the rest; for, as our judgment cannot be corrected by anything without, the validity and use of every part depends upon the relation in which it stands to all the rest within the reason.

So in the structure of an organized body, the end of each member can only be deduced from the full conception of the whole. It may, then, be said of such a Critick, that it is never trustworthy except it be *perfectly complete*, down to the smallest elements of the reason. In the sphere of this faculty you can determine either *everything* or *nothing*.

But although a mere sketch, preceding the Critick of Pure Reason, would be unintelligible, unreliable and useless, it is all the more useful as a sequel. For so we are able to grasp the whole, to examine in detail the chief points of importance in the science, and to improve in many respects our exposition, as compared with the first execution of the work.

Such is the plan sketched out in the following pages, which, after the completion of the work, may be carried out *analytically*, though the work itself must absolutely be executed in the *synthetical* method, in order that the science may present all its articulations, as the structure of a peculiar cognitive faculty, in their natural combination. But should any reader find this plan, which I publish as the Prolegomena to any future Metaphysic, itself difficult, let him consider that every one is not bound to study Metaphysic, that there are many minds which succeed very well, in genuine and even deep sciences more closely allied to intuition, while they cannot succeed in investigations proceeding only by means of abstract concepts.[1] In such cases men should apply their talents to other subjects. But he that undertakes to judge, or still more to construct a system of Metaphysic, must satisfy the demands here made, either by adopting my solution, or by thoroughly refuting it, and substituting another. To evade it is impossible.

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[1] It is nevertheless to be observed that a large proportion of great metaphysicians have been trained and distinguished mathematicians. The examples of Plato, Aristotle, Des Cartes, Leibnitz, Berkeley, and Kant will occur to the reader. Even in the present day there are some remarkable cases of this combination. M.

In conclusion, let it be remembered that this much-abused obscurity—a very common cloak for men's own laziness or stupidity—has its uses, since all who in other sciences observe a prudent silence, in this speak authoritatively, and decide boldly, because their ignorance is not here contrasted with the knowledge of others. Yet it does contrast with sound critical principles, which we may therefore commend in the words of Virgil:

> Ignavum, fucos, pecus a præsepibus arcent.

PROLEGOMENA.

PREAMBLE ON THE PECULIARITIES OF ALL METAPHYSICAL COGNITION.

§ 1. *Of the Sources of Metaphysic.*

IF we wish to present a cognition *as a science*, we must first determine accurately the features which no other science has in common with it, in fact its *peculiarity*, otherwise the boundaries of all sciences become confused, and none of them can be treated thoroughly according to its nature.

This peculiarity may consist of a simple difference of *object*, or of the *sources of cognition*, or of the *kind of cognition*, or perhaps of all three conjointly. On this, therefore, depends the idea of a possible science and its territory.

First, as concerns the *sources* of metaphysical cognition, its very concept implies that they cannot be empirical. Its principles (including not only its fundamental judgments, but its fundamental concepts) must never be derived from experience. It must not be physical but metaphysical knowledge, viz., knowledge lying beyond the bounds of experience. It can therefore have for its basis neither external experience which is the source of physics proper, nor internal which is the basis of empirical psychology. It is therefore *a priori* knowledge, coming from pure Understanding and pure Reason.

But so far Metaphysic would not be distinguishable from pure Mathematic; it must therefore be called *pure philosophical cognition;* and for the meaning of this term I refer to the *Critick of the pure Reason*, p. 435, where the distinction between these two employments of the reason is sufficiently explained. So far concerning the sources of metaphysical cognition.

§ 2. *Concerning the Kind of Cognition which can alone be called Metaphysical.*

a.—Of the Distinction between Analytical and Synthetical Judgments in general. The peculiarity of its sources demands that metaphysical cognition must consist of nothing but *a priori* judgments. But whatever be their origin, or their logical form, there is a distinction in judgments, as to their content, according to which they are either merely *explicative*, adding nothing to the content of the cognition, or *ampliative*, increasing the given cognition: the former may be called *analytical*, the latter *synthetical*, judgments.

Analytical judgments express nothing in the predicate but what has been already actually thought in the concept of the subject, though not so distinctly or with the same (full) consciousness.[1] When I say: All bodies are extended, I have not amplified in the least my concept of body, but have only analysed it, as extension was really thought to belong to that concept before the judgment was made, though it was not expressed; this judgment is therefore analytical. On the contrary, this judgment: All bodies have weight, contains in its predicate something not really thought in the general concept of body; it amplifies my knowledge by adding something to my concept, and must therefore be called synthetical.

b. — *The Common Principle of all Analytical Judgments is the Law of Contradiction.* All analytical judgments depend wholly on the law of Contradiction, and are in their nature *a priori* cognitions, whether the concepts that supply them with matter be empirical or not. For the predicate of an affirmative analytical judgment is already contained in the concept of the subject, of which it cannot be denied without contradiction. In the same way its opposite is necessarily denied of the subject in an analytical, but negative, judgment, by the same law of contradiction. Such is the nature of the judgments: all bodies are extended, and no bodies are unextended.

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[1] The difference between an attribute obscurely felt to be in the subject, and which requires a judgment to explicate it, and an attribute necessarily joined to the subject, seems very small indeed. But a little reflection will show us that we cannot think the subject without the first, whereas the second is always seen to be an addition, even if necessary. M.

For this very reason all analytical judgments are *a priori*, even when the concepts are empirical, as, for example, Gold is a yellow metal; for to know this I require no experience beyond my concept of gold, as a yellow metal; it is, in fact, the very concept, and I need only analyse it, without looking beyond it elsewhere.

c.—Synthetical Judgments require a different Principle from the Law of Contradiction. There are synthetical *a posteriori* judgments of empirical origin; but there are also others which are certain *a priori*, and which spring from pure Understanding and Reason. Yet they both agree in this, that they cannot possibly spring from the principle of analysis, or the law of contradiction, alone; they require a quite different principle, though, from whatever they may be deduced, they must be *subject to the law of contradiction*, which must never be violated, even though everything cannot be deduced from it. I shall first classify synthetical judgments.

1. *Empirical Judgments* are always synthetical.[1]

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[1] See the very important passage in the First Edition of the *Critick*, quoted by me on p. 12 of Kuno Fischer's *Commentary*. 'In all synthetical judgments I must have something else (x) be-

For it would be absurd to base an analytical judgment on experience, as our concept suffices for the purpose without requiring any testimony from experience. That body is extended, is a judgment established *a priori*, and not an empirical judgment. For before appealing to experience, we already have all the conditions of the judgment in the concept (of the subject), from which we have but to elicit the predicate according to the law of contradiction, and thereby to become conscious of the *necessity* of the judgment, which experience could not even teach us.

2. *Mathematical Judgments* are all synthetical. This fact seems hitherto to have altogether escaped the observation of those who have analysed the human reason; it even seems directly opposed to all their conjectures, though incontestably certain, and most important in its consequences. For as it was found that the conclusions of mathematicians all proceed according to the law of contradiction (as is demanded by all apodictic certainty), men

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sides the concept of the subject, to which the understanding must apply, in order to discover a predicate not contained in the subject. In the case of empirical judgments this x is the complete experience of the subject, and my concept indicates that complete experience by means of a part of it, to which I can add other facts of the same experience, as belonging to the first. It follows that these judgments, though synthetical as regards the concept, are really analytical as regards our experience when actually completed. M.

persuaded themselves that the axioms (fundamental principles) were known from the same law. This was a great mistake, for a synthetical proposition can indeed be comprehended according to the law of contradiction, but only by presupposing another synthetical proposition from which it follows, never in itself.

First of all, we must observe that all proper mathematical judgments are *a priori*, and not empirical, because they carry with them necessity, which cannot be obtained from experience. But if this be not conceded to me, very good; I shall confine my assertion to *pure Mathematic*, the very notion of which implies that it contains pure *a priori* and not empirical cognitions.

It might at first be thought that the proposition $7 + 5 = 12$ is a mere analytical judgment, following from the concept of the sum of seven and five, according to the law of contradiction. But on closer examination it appears that the concept of the sum of $7 + 5$ contains merely their union in a single number, without its being at all thought what the particular number is that unites them. The concept of 12 is by no means thought by merely thinking of the combination of seven and five; and analyse this possible sum as we may, we shall not discover 12 in the concept. We must go beyond these concepts, by calling to our aid the intuition corresponding to one of them, say our five fingers, or five [visible] points (as Segner did in his arithmetic), and we must add successively the units of the five given in the intuition to the concept of seven.[1] Hence our concept is really amplified by the proposition $7+5=12$, and we add to the first a second, not thought in it. Arithmetical judgments are therefore always synthetical, and the more plainly according as we take larger numbers; for in such cases it is clear that, however closely we analyse our concepts without calling intuition to our aid, we can never find the sum by such mere dissection.

Just as little is any principle of geometry analytical. That a straight line is the shortest between two points, is a synthetical proposition. For my concept of straight contains nothing of quantity, but only a quality. The attribute of shortness is therefore altogether additional, and not obtainable by any analysis of the concept. Intuition, which alone makes the synthesis possible, must here also be brought in to assist us.

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[1] The reader will observe that to the *concept* of 7, the *intuition* of 5 is gradually added; it is not an addition of two intuitions. In the case of $2+2=4$, this latter may be the case, but most probably more than 5 cannot be grasped in a single visible intuition. Accordingly 7 is first made up of $5+2$, and then the resulting concept used for further processes. The system adopted in Roman figures (which is indeed almost universal), illustrates the point exactly. Instead of writing six points or strokes, we write VI, substituting the symbol V, perhaps a rude representation of an open hand, for the intuition IIIII. M.

[Some other principles, assumed by geometers, are indeed really analytical, and depend on the law of contradiction; but they only serve, as identical propositions, in the chain of method, and not as[1] principles, ex. gr. $a = a$, the whole is equal to itself, or $a + b > a$, the whole is greater than its part.] [illegible] // And yet even these, though they are recognised as valid from mere concepts, are only admitted in mathematics, because they can be represented in intuition.[2] What usually makes us believe that the predicate of such apodictic judgments is already contained in our concept, and that the judgment is therefore analytical, is the ambiguity of the expression. For we ought to add in thought a certain predicate to a given concept, and this necessity already attaches to the concepts. But the question is not what we *ought to think* in given concepts, but what we *really think* in them, though obscurely, and so it appears that the predicate belongs to these concepts necessarily indeed, though not as thought in the concept itself, but through the intervention of an intuition, which must be added.

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[1] Not '*from* principles;' I think we should read *als*, not *aus*. M.

[2] The remainder of this paragraph is very difficult, except we understand it, not of the analytical judgments just described, and to which Kant's language would seem to refer it, but of the synthetical axioms previously discussed. The whole passage, beginning from the analysis of $7 + 5 = 12$ is transcribed verbatim from the Critick, without a single explanation. M.

§ 3. *Observations on the General Division of Judgments into Analytical and Synthetical.*

This division is indispensable, as concerns the Critick of the human understanding, and therefore deserves to be called classical; I know not whether it is elsewhere of important use. And this is the reason why dogmatic philosophers, that always seek the sources of metaphysical judgments in Metaphysic itself, and not apart from it, in the pure laws of reason generally—why these men altogether neglected this apparently obvious distinction. So it was that the celebrated Wolf, and his acute follower, Baumgarten, came to seek the proof of the principle of Sufficient Reason, which is clearly synthetical, in the principle of Contradiction. In Locke's Essay, on the contrary, I find an indication of my division. For in the fourth book (chap. iii., § 9, seq.), after he has discussed the various connexions of representations in judgments, and their sources, one of which he makes identity and contradiction (analytical judgments), and another the coexistence of representations in a subject, he afterwards confesses (§ 10) that our *a priori* knowledge of the latter is very narrow, and almost nothing. But in his remarks on this species of cognition, there is so little of what is definite, and reduced to rules,[1] that we cannot wonder if no one, not even Hume, was led to make investigations concerning this sort of judgments. For such general, and yet determinate principles are not easily learned from other men, who have had them obscurely in their minds. We must hit on them first by our own reflection, then we find them elsewhere, where we could not possibly have found them at first, because the authors themselves did not know that such an idea lay at the basis of their observations. Men who never think independently have nevertheless the acuteness to discover everything, after it has been once shown them, in what was said long since, though no one ever saw it there before.

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[1] Unfortunately, Kant had not observed the really decisive passage in Locke on the point. When discussing officially the various kinds of agreement and disagreement among our ideas, he actually enumerates the very classes, *with the very examples*, of Kant. First, judgments of identity and diversity, sc. analytical, and his example is: Blue is not yellow. Secondly, judgments of relation, an ill-chosen term, but evidently the same as Kant's synthetical *a priori*, for his example is a mathematical judgment, such as: The angles of a triangle are equal to two right angles. Thirdly, judgments of coexistence (synthetical *a posteriori*), such as: Gold is fusible. Fourthly, judgments of existence (afterwards distinguished by Kant as *subjectively* synthetical), such as: God is. Can anything be more distinct than this? See Locke's *Essay*, book iv., chap. i., § 7. M.

§ 4. *The General Question of the Prolegomena.—Is Metaphysic at all possible?*

Were a Metaphysic, which could maintain its place as a science, really in existence—if we could say, here is Metaphysic, learn it, and it will convince you irresistibly and irrevocably of its truth—then this question would be useless, and there would only remain that other, which is rather a test of our acuteness, than a proof of the existence of the thing itself—I mean, the question *how the science is possible*, and how the understanding comes to attain it. But the human reason has not been so fortunate in this case. There is no single book to which you can point as you do to Euclid, and say: this is Metaphysic, here you may find the noblest objects of this science, the knowledge of a highest Being, and of a future existence, proved from principles of pure reason. We can be shown indeed many judgments, demonstrably certain, and never questioned; but these are all analytical, and rather concern the materials and the scaffolding for Metaphysic, than the extension of knowledge, which is our proper object in studying it (§ 2). Even supposing you produce synthetical judgments (such as the law of Sufficient Reason), which you could never have proved, as you ought, from pure reason *a priori*, but which we gladly concede; nevertheless, when they come to be employed for your principal object, you lapse into such doubtful assertions, that in all ages one Metaphysic has contradicted another, either in its assertions, or their proofs, and thus has itself destroyed its own claim to lasting assent. Nay the very attempts to set up such a science are the main cause of the early appearance of scepticism, a mental attitude in which reason treats itself with such violence, that it could never have arisen save from complete despair at ever satisfying our most important aspirations. For long before men began to question nature methodically, they questioned isolated reason, which had to some extent come into use by means of ordinary experience; for reason is ever present, while laws of nature must usually be sought with labour. So Metaphysic floated to the surface, like foam, like it also in this, that when what had been gathered was dissolved, there immediately appeared a new supply on the surface, to be ever eagerly collected by some, while others, instead of seeking in the depths the cause of the phenomenon, thought they showed their wisdom by ridiculing the idle labour of their neighbours.

The essential and distinguishing feature of pure *mathematical* cognition among all other *a priori* cognitions, is that it cannot at all proceed *from concepts*, but only by means of the construction of concepts (Critick, p. 435). As therefore in its judgments it must proceed beyond the concept to that which contains the corresponding intuition, these judgments can and ought never to arise analytically, by dissecting the concept, but are all synthetical.

I cannot refrain from pointing out the disadvantages resulting to philosophy from the neglect of this easy, and apparently insignificant observation. Hume indeed was prompted (a task worthy of a philosopher) to cast his eye over the whole field of *a priori* cognitions in which the human understanding claims such mighty possessions. But he incautiously severed from it a whole, and indeed its most valuable province, viz., pure mathematic. For he thought its nature, or so to speak, its constitution, depended on totally different principles, namely on the law of contradiction alone; and although he did not divide judgments so formally or universally as I have here done, what he said was equivalent to this: that mathematic contains only *analytical*, but metaphysic synthetical *a priori* judgments. In this he was greatly mistaken, and the mistake had a decidedly injurious effect upon his whole conception [system]. But for this, he would have extended his question concerning the origin of our synthetical judgments far beyond the metaphysical concept of Causality, and included in it the possibility of mathematic *a priori* also, for this latter he must have assumed to be equally synthetical. And then he could not have based his metaphysical judgments on mere experience without subjecting the axioms of mathematic equally to experience, a thing which he was far too acute to do.[1] The good company into which metaphysic would thus have been brought, would have saved it from the danger of a contemptuous ill-treatment, for the thrust intended for it must have reached mathematic, which was not and could not be Hume's intention. Thus that acute man would have been led into considerations, which must needs be similar to those that now occupy us, but which would have gained inestimably by his inimitably elegant style.

Proper metaphysical judgments are all synthetical. We must distinguish judgments *belonging to metaphysic* from properly metaphysical judgments. Many of the former are analytical, but they only afford the means for metaphysical judgments, which are the whole end of the science, and which are always synthetical. For whatever concepts belong to metaphysic (as for example substance), the judgments, which arise from their mere analysis, belong also to metaphysic; as for example, substance is that which only exists as subject; and by means of several such analytical judgments, we seek to approach the definition of the concept. But as the analysis of pure concepts of the understanding, such as are found in metaphysic, does not proceed differently from the dissection of any other (empirical) concept, not belonging to metaphysic (such as: the air is an elastic fluid, the elasticity of which is not removed by any known degree of cold), it follows that the concept indeed, but not the analytical judgment, is properly metaphysical. This science has something peculiar in the production of its *a priori* cognitions, which must therefore be distinguished from the features it has in common with other rational knowledge. Thus the judgment, that all the substance in things is permanent, is a synthetical and properly metaphysical judgment.

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[1] Kant's confidence on this point is hardly justified. For in Hume's *Essays* (which he declares to be his final declaration on Philosophy) there are a good many hints that mathematics might be based on experience. Cf. *Essays*, vol. ii., note P, &c. M.

If the *a priori* principles, which constitute the materials of metaphysic, have first been collected on fixed principles, then their analysis is of great value; it can also be taught as a particular part (as a *philosophia definitiva*), containing nothing but analytical judgments pertaining to metaphysic, and separate from the synthetical, which constitute metaphysic proper. And indeed these analyses are not elsewhere of much value, except in metaphysic, that is, as regards the synthetical judgments, which are to be generated by these previously analysed concepts.

The conclusion drawn in this section then is, that metaphysic is properly concerned with synthetical propositions *a priori*, and these alone constitute its end, for which it indeed requires various analyses of its concepts, which are analytical judgments, but wherein the procedure is not different from that in every other sort of knowledge, in which we merely seek to render our concepts distinct by analysis. But the *generation* of *a priori* cognition, as well of intuition as according to concepts, in fine of synthetical propositions *a priori* in philosophical cognition, this makes up the essential matter of Metaphysic.

Weary therefore as well of dogmatism, which teaches us nothing, as of scepticism, which does not even promise us anything, not even the quiet state of a contented ignorance—excited [as we are] by the importance of a cognition of which we stand in need, and rendered suspicious by long experience with regard to all knowledge which we believe we possess, or which offers itself, under the title of pure reason—there remains but one critical question to which the answer must determine our future procedure: *Is Metaphysic at all possible?* But this question must be answered not by sceptical objections to the assertions of actual [systems of] Metaphysic (for we do not as yet admit such a thing), but from the conception, as yet only *problematical*, of a science of this sort.

In the *Critick of the Pure Reason* I have treated this question synthetically, by making inquiries into pure reason itself, and endeavouring in this source to determine the elements as well as the laws of its pure use according to principles. The task is difficult, and requires a resolute reader to penetrate by degrees into a system, based on no data except the reason itself, and which therefore seeks, without resting upon any fact, to unfold knowledge from its original germs. *Prolegomena* on the contrary are designed for exercises; they are intended rather to point out what we have to do in order to realise [if possible] a science, than to propound it. They must therefore rest upon something already known as trustworthy, from which we can set out with confidence, and ascend to sources as yet unknown, the discovery of which will not only explain to us what we knew, but exhibit a sphere of many cognitions which all spring from the same sources. The method of *Prolegomena*, especially of those designed as a preparation for future metaphysic, is consequently *analytical*.

But it happens fortunately, that though we cannot assume metaphysic to be an actual science, we can say with confidence, that certain pure *a priori* synthetical cognitions, *pure Mathematic* and *pure Physic*, are actual and given; for both contain propositions, which are thoroughly recognised as apodictically certain, partly by mere reason, partly by general consent [arising] from experience, and yet as independent of experience. We have therefore some at least *uncontested* synthetical knowledge *a priori*, and need not ask if it be possible (for it is real), but *possible*, in order that we may deduce from the principle which makes the given cognitions possible the possibility of all the rest.

The General Problem: How is Cognition from Pure Reason possible?

§ 5. We have already seen the vital distinction between analytical and synthetical judgments. The possibility of analytical propositions was easily comprehended, being entirely founded on the law of Contradiction. The possibility of synthetical *a posteriori* judgments, of those which are gathered from experience, likewise requires no particular explanation; for experience is nothing but a continual synthesis of perceptions. There remain therefore only synthetical propositions *a priori*, of which the possibility must be sought or investigated; because they must depend upon other principles than that of contradiction.

But we have no right to seek the *possibility* of such propositions here, that is, to inquire whether they are possible. For there are enough of them actually given with undoubted certainty, and as our present method is analytical, we shall start from the assertion, that such synthetical but pure cognition of the reason actually exists; but we must then *inquire into* the ground of this possibility, and ask, how this cognition is possible, in order that we may from the principles of its possibility be enabled to determine the conditions of its use, its sphere and its bounds. The proper problem upon which all depends, when expressed with scholastic precision, is therefore:

How are Synthetic Propositions a priori possible?

For the sake of popularity I have above expressed this problem somewhat differently, as an inquiry after knowledge from pure reason, and this I could do for once without detriment to the desired view [Einsicht], because, as we have only to do here with metaphysic and its sources, the reader will, I hope, after the foregoing remarks, keep in mind that when we speak of knowledge from pure reason, we do not mean analytical, but always synthetical cognition.[1]

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[1] As knowledge gradually advances, certain expressions now classical, which have been used since the infancy of science, cannot but be found insufficient and unsuitable, and there cannot but be some danger of confusing a newer and more appropriate use with the older. The analytical method, so far as it is opposed to the synthetical, is very distinct from a complex of analytical propositions: it signifies only that we set out from what is sought, as if it were given, and ascend to the only conditions under which it is possible. In this method we often use nothing but synthetical propositions, as in mathematical analysis, and it were better to term it the regressive method, in contradistinction to the synthetic or progressive. A principal part of Logic

Upon the solution of this problem the standing or the falling of Metaphysic and consequently its existence entirely depend. Let any one make assertions ever so plausible with regard to it, let him pile conclusions upon conclusions till they almost smother us; if he has not been previously able to answer this question satisfactorily, I have a right to say: this is all vain groundless philosophy and false wisdom. You speak through pure reason, and profess, as it were, to create cognitions *a priori* by not only dissecting given concepts, but also by asserting connexions which do not rest upon the principle of contradiction, and which you profess to perceive quite independently of all experience; how do you attain this, and how will you justify yourself in such pretensions? An appeal to the consent of the common sense of mankind cannot be allowed; for that is a witness whose reputation depends only upon public rumour,

Quodcunque ostendis mihi sic, incredulus odi.

Indispensable however as it is to answer this question, it is equally difficult to do so; and though the principal reason that this answer was not attempted long ago is, that the possibility of such a question

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too is distinguished by the name of Analytic, which here signifies the logic of truth (in contrast to Dialectic), without considering whether the cognitions belonging to it are analytical or synthetical.

never occurred to any body, there is yet another reason. A satisfactory answer to this single question requires a much more constant, profound, and laborious reflection, than the most diffuse work on Metaphysic, which on its first appearance promised immortality to its author. And every intelligent reader, when he carefully reflects what this problem requires, must at first be struck with its difficulty, and would regard it as insoluble and even impossible, did there not actually exist pure synthetical cognitions *a priori.* This really happened to David Hume, though he did not represent to himself the question at all so universally as is done here, and as must be done if the answer is to be decisive for all Metaphysic. For how is it possible, says that acute man, that when a concept is given me, I can go beyond it and connect with it another, which is not contained in it, and in such a manner as if the latter *necessarily* belonged to the former? Nothing but experience can furnish us with connexions of that sort (this was his inference from that difficulty, which he held an impossibility), and all that supposed necessity or, what is the same thing, all cognition *a priori* (held to be such) is nothing but a long habit of finding something true, and hence of holding subjective necessity to be objective.

If the reader should complain of the difficulty and the labour which I occasion him in the solution of this problem, let him endeavour to do it himself in an easier way. Perhaps he will then acknowledge the obligation due to him who has undertaken a work of so profound research, and will rather be surprised at the facility with which, considering the nature of the thing, the solution has been attained. Yet it has cost a labour of many years to solve this problem in its whole universality (in the mathematical sense, that is, sufficient for all cases), and finally to exhibit it in the analytical form, as the reader finds it here.

All metaphysicians are therefore solemnly and legally suspended from their occupations till they shall have answered in a satisfactory manner the question, *How are synthetic cognitions a priori possible?* For the answer contains the only credentials which they must show when they have any thing to bring us in the name of pure reason. But if they do not possess these credentials, they can expect nothing else than to be dismissed without farther inquiry by reasonable people, who have already been so often deceived.

If they on the other hand desire to carry on their business not as a *science*, but as an *art* of persuasion wholesome and suited to the general common sense of man, they cannot in justice be prevented. They will then speak the modest language of a rational faith, they will grant that they are not allowed even to *conjecture*, far less to *know*, anything which lies beyond the bounds of all possible experience, but only to *assume* something (not for speculative use, which they must abandon, but for practical only) that is possible and even indispensable for the guidance of the understanding and of the will in life. In this manner only can they bear the title of useful and of wise men, and the more so in proportion as they renounce that of metaphysicians; for these will be speculative philosophers, and as, when judgments *a priori* are in question, poor probabilities cannot be admitted (for what is pretended to be known *a priori* is thereby announced as necessary), such men cannot be permitted to play with conjectures, but their assertions must be either science, or worth nothing at all.

It may be said, that all transcendental philosophy, which necessarily precedes all Metaphysic, is nothing but the complete solution of the problem here propounded, in systematical order and completeness. Hitherto we have accordingly never had any transcendental philosophy; for what goes by its name is properly a part of Metaphysic; whereas the former science is intended first to constitute the possibility of this latter, and must therefore precede all Metaphysic. And it is not surprising that when a whole science, deprived of all help from other sciences, and consequently in itself quite new, is required to answer a single question sufficiently, we should find this answer combined with trouble and difficulty, nay even with obscurity.

As we now proceed to this solution, and according to the analytical method, in which we presuppose, that such cognitions from pure reason really exist; we can only appeal to two sciences of theoretical cognition (as such only is under consideration here), *pure mathematic* and *the pure science of nature* (physic). For none but these can exhibit objects intuitively to us, and consequently (if there should occur in them a cognition *a priori*) can show the truth or harmony of the cognition with the object *in concreto*, that is, its reality, from which we could then proceed to the ground of its possibility by analytic procedure. This method facilitates our labour greatly, in which the universal considerations are not only applied to facts, but even set out from them, instead of which they must in synthetic procedure be entirely derived *in abstracto* from concepts.

But, in order to rise from these real and at the same time well grounded pure cognitions *a priori* to a possible cognition (which we are seeking), or to Metaphysic as a science—it is necessary for us to comprehend that which occasions it, I mean the mere natural, though in spite of its truth not unsuspected, cognition *a priori* which lies at the basis of that science, the elaboration of which without any critick of its possibility is commonly called metaphysic,—in a word, we must comprehend the natural predisposition to such a science under our chief inquiry, and thus will the general transcendental problem, divided into four other questions, be gradually answered :

1. *How is pure mathematic possible ?*
2. *How is pure physic [science of nature] possible ?*
3. *How is metaphysic in general possible ?*
4. *How is metaphysic as a science possible ?*

It may be seen, that the solution of these problems, though chiefly designed to exhibit the essential matter of the Critick, has yet something peculiar, which deserves attention in itself. This is the seeking the sources of given sciences in the reason itself, so that this its faculty of knowing something *a priori* may be investigated and measured by means of the act itself. By this procedure these sciences themselves gain, if not with regard to their content, yet as to their right use, and while they throw light on the higher question concerning their common origin, at the same time give occasion better to explain their individual nature.

FIRST PART OF THE GENERAL TRANSCENDENTAL PROBLEM.

How is Pure Mathematic possible?

§ 6. HERE is a great and established cognition, which embraces even now a wonderful sphere, and bespeaks hereafter an unbounded extension, which carries with it thoroughly apodictical certainty, that is, absolute necessity, which therefore rests upon no empirical grounds, and consequently is a pure product of reason, and moreover is thoroughly synthetical. 'How then is it possible for human reason to bring to pass a cognition of this nature entirely *a priori?*' Does not this faculty, as it neither is nor can be based upon experience, presuppose some ground of cognition *a priori*, which lies deeply hidden, but which might reveal itself by these its effects, if their first beginnings were but diligently investigated?

§ 7. But we find all mathematical cognition having this peculiarity, that it must previously exhibit its concept *in intuition* and indeed *a priori*, therefore in an intuition which is not empirical, but pure. Without this process Mathematic cannot take a single step; hence its judgments are always *intuitive;* whereas philosophy must be satisfied with *discursive* judgments *from mere concepts*, and though it may illustrate its doctrines by intuition, can never derive them from it. This observation on the nature of Mathematic gives us a clue to the first and highest condition of its possibility, which is, that *some pure intuition* must form its basis, in which all its concepts can be exhibited or *constructed*, *in concreto* and yet *a priori*. If we can find out this pure intuition and its possibility, we may thence easily explain how synthetical propositions *a priori* are possible in pure mathematic, and consequently how this science itself is possible. Empirical intuition enables us without difficulty to enlarge the concept which we frame of an object of intuition, by new predicates, which intuition itself presents synthetically in experience. Pure intuition does so likewise, only with this difference, that in the latter case the synthetical judgment is *a priori* certain and apodictical, in the former, only *a posteriori* and empirically certain; because this latter contains only what occurs in contingent empirical intuition, but the former, what must be met in pure intuition necessarily, for the predicate is inseparably conjoined as intuition *a priori* with the concept *before all experience* or individual perception.

§ 8. But with this step our perplexity seems rather to increase than to lessen. For the question now is, *How is it possible to intuite anything a priori?* An intuition is such a representation as immediately depends upon the presence of the object. Hence it seems impossible *originally* to intuite *a priori*, because intuition would in that event take place without either a former or a present object to refer to, and by consequence could not be intuition. Concepts indeed are such, that we can easily form some of them *a priori* (namely those which contain nothing but the thinking an object in general), without finding ourselves in an immediate relation to the object. Such are, for instance, the concepts of Quantity, of Cause, &c. But even these require, in order to give them a signification, a certain concrete use—that is, an application to some intuition, by which an object of them is given us. But how can the *intuition* of the object precede the object itself?

§ 9. Were intuition of such a nature, as to represent things *as they are in themselves*, intuition could not take place *a priori*, but must be always empirical. For I can only know what is contained in the object in itself when it is present and given to me. It is indeed even then incomprehensible how the intuition of a present thing should make me know this thing as it is in itself, as its properties cannot migrate into my faculty of representation; but even granting this possibility, an intuition of that sort would not take place *a priori*, that is, before the object were presented to me; for without this latter fact no ground of relation between my representation and the object can be imagined; it must then depend upon direct inspiration [Eingebung]. It is therefore only possible in one way for my intuition to anticipate the reality of the object, and to be cognition *a priori*: *if it* (the intuition) *contains nothing but the form of the sensibility, which precedes in me all the real impressions through which I am affected by objects.* For I can know *a priori*, that objects of sense can only be intuited according to this form of the sensuous intuition. Hence it follows: that propositions, which concern this form of sensuous intuition only, are possible and valid for objects of the senses, as also conversely, that intuitions which are possible *a priori*, can never concern any other things than objects of our senses.

§ 10. It is then only the form of sensuous intuition by which we can intuite things *a priori*, but by which we can know objects only as they *appear* to us (to our senses), not as they are in themselves; and this assumption is absolutely necessary, if synthetical propositions *a priori* be granted as possible, or if, in case they really occur, their possibility is to be comprehended and determined beforehand.

But Space and Time are the intuitions which pure Mathematic lays at the foundation of all its cognitions, and of the judgments which appear at once demonstrable and necessary; for Mathematic must first exhibit all its conceptions in intuition, and pure Mathematic in pure intuition, that is, it must construct them; and otherwise (as it cannot proceed analytically, by dissection of concepts, but synthetically) it is impossible in this science to take a single step. For if pure intuition be wanting, there is nothing in which the matter for synthetical judgments *a priori* can be given. Geometry is based upon the pure intuition of space. Arithmetic accomplishes its concept of number by the successive addition of unities in time; and pure Mechanic especially cannot attain its concepts of motion without employing the representation of time.[1] Both representations however are only intuitions; for if we omit from the empirical intuitions of bodies and their alterations (motion) everything empirical, or belonging to sensation, space and time still remain, which are therefore pure intuitions that lie *a priori* at the basis of the empirical. Hence they can never be omitted, but at the same time, by their being pure intuitions *a priori*, they prove that they are mere forms of our sensibility, which must precede all empirical intuition, or perception of real objects, and conformably to which objects can be known *a priori*, but only as they appear to us.

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[1] The form of this statement, which makes an admission nowhere supported in the Critick, is peculiar. I see in it a lurking doubt in Kant's mind whether Arithmetic may not be derived from Time, as all his commentators believed. He feels sure about Mechanic. The reader will also note that he speaks as if only the *concept of number generally* were so derived. This is certainly true of the *schema* of quantity, and may also be asserted of all very large numbers, which we cannot properly imagine, *except as requiring unfinished acts of addition.* M.

§ 11. The problem of the present section is therefore solved. Pure mathematic, as synthetical cognition *a priori*, is only possible by referring to no other objects than those of the senses. At the basis of their empirical intuition lies a pure intuition (of space and of time) and indeed *a priori*. This is possible, because the latter intuition is nothing but the mere form of the sensitive faculty, which precedes the real appearance of the objects, in that it in fact makes them possible. Yet this faculty of intuiting *a priori* affects not the matter of the phenomenon (that is, the sensation in it, for this constitutes that which is empirical), but its form, viz., space and time. Should any man venture to doubt that these are determinations adhering not to things in themselves, but to their relation to our sensibility, I should be glad to know how it can be possible to know *a priori* (and of course before all acquaintance with, or presentation of, things), how their intuition must be constituted; which however is here the case with space and time. But this is quite comprehensible as soon as both count for nothing more than formal conditions of our sensibility, while the objects count merely as phenomena for then the form of the phenomenon, that is, the pure intuition, can by all means be represented as proceeding from ourselves, that is, *a priori*.

§ 12. In order to add something by way of illustration and confirmation, we need only attend to the ordinary and necessary procedure of geometers. All proofs of the complete equality[1] of two given figures (where the one can be completely substituted for the other), come ultimately to super-position, which is evidently nothing else than a synthetical proposition resting upon immediate intuition, and this intuition must be given pure, or *a priori*, otherwise the proposition could not rank as apodictically certain, but would have empirical certainty only. It could only be said that it is always remarked so, and holds as far as our perception reaches. That complete space (which is itself no longer the boundary of another space) has three dimensions, and that space in general cannot have more, is based on the proposition that not more than three lines can intersect at right angles in one point; but this proposition cannot by any means be shown from concepts, but rests immediately on pure and *a priori* intuition, because it is apodictically certain. That we can require a line to be drawn to infinity (*in indefinitum*),[2] a series of changes to be continued (for example, spaces passed through by motion) *in indefinitum*, presupposes a representation of space and time, which can only attach to intuition, namely so far as it in itself is bounded by nothing, for from concepts it could never be inferred. Consequently Mathematic is really built upon pure intuitions, which make its synthetical and apodictically valid propositions possible, and hence our transcendental deduction of the notions of space and of time explains at the same time the possibility of pure mathematic, which may be conceded, but by no means explained, without some such deduction, and without our assuming 'that everything which can be given to our senses (to the external sense in space, the internal in time) is intuited by us as it appears to us, not as it is in itself.'

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[1] As distinguished from *equivalence*, or mere equality of area. M.

[2] This identification of *unendlich* with *indefinitum* goes far to corroborate my rendering of the objectionable phrase in the Aesthetic, which speaks of space as an infinite (unendlich) given quantity. Cf. vol. i. p. 62. M.

§ 13. Those who cannot yet shake off the notion of space and time being real qualities that inhere in things in themselves, may exercise their acumen on the following paradox. When they have in vain attempted its solution, and are free from prejudices at least for a few moments, they will suspect that the degradation of space and of time to mere forms of our sensuous intuition may perhaps be well founded.

When two things are quite similar in all the points, which can be known of each separately (in all the determinations pertaining to quantity and to quality), it must follow, that the one can in all cases and relations be put in the place of the other, without this substitution occasioning the least perceptible difference. This in fact is the case with plane figures in geometry; but various spherical figures exhibit, notwithstanding this complete internal agreement, such a [limited] one in their external relation, that the one figure cannot possibly be put in the place of the other; for instance, two spherical triangles on opposite hemispheres, which have an arc of the equator as their common base, may be quite equal, both as regards sides and angles, so that nothing is to be found in the simple and complete description of the one, that is not equally in the description of the other, and yet the one cannot be put in the place of the other (upon the opposite hemisphere). Here is then an *internal* difference between the two triangles, which difference no understanding can describe as internal, and which only manifests itself by external relations in space. But I shall give more obvious examples, taken from common life.

What can be more similar in every respect to my hand and to my ear, or in every part more alike, than their images in a mirror? And yet I cannot put such a hand as is seen in the glass in the place of its archetype; for if this is a right, that in the glass is a left hand, and the image or reflection of the right ear is a left one that never can supply the place of the other. Here there are no internal differences.

which any understanding could perceive by thought alone; and yet the differences are internal as far as the senses teach, for the left hand cannot be enclosed in the same bounds as the right, notwithstanding the complete equality and similarity of both (they are not congruent); the glove of one hand cannot be used for the other. What is the solution? Those objects are not representations of things as they are in themselves, and as the pure understanding would cognise them, but sensuous intuitions, that is, phenomena, the possibility of which rests upon the relation of certain things unknown in themselves to something else, viz., to our sensibility. Space is the form of the external intuition of this sensibility, and the internal determination of every [limited] space is only possible by the determination of its external relation to all space, of which it is a part (in other words, by its relation to the external sense); that is, the part is only possible through the whole, which is never the case with things in themselves, as objects of the mere understanding, but with phenomena only. And hence we cannot render the difference between similar and equal but incongruous things (for instance, spirals winding opposite ways[1]) intelligible by any concept, but only by the relation to the right and the left hand, which relates immediately to intuition.

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[1] Not 'snails rolled up contrary to all sense,' as Mr. Richardson has it!

REMARK I.

Pure Mathematic, and especially pure geometry, can only have objective reality on condition of their referring to objects of sense, in regard to which the principle holds good, that our sensuous representation is a representation not of things in themselves, but of the way in which they appear to us. Hence it follows, that the propositions of geometry are not the determinations of a mere creation of our poetic fancy, which therefore cannot be referred with certainty to real objects; but rather that they are necessarily valid of space, and consequently of all that may be found in it, because space is nothing else than the form of all external phenomena, in which [form] alone objects of sense can be given. Sensibility (of which the form is the basis of geometry) is that upon which the possibility of external phenomena rests; these therefore can never contain anything but what geometry prescribes to them. It would be quite otherwise if the senses were so constituted as to represent objects as they are in themselves. For then it would not by any means follow from the representation of space, which the geometer makes his *a priori* foundation with all its properties, that this space, together with what is thence inferred, must be so in nature. The space of the geometer would be considered a mere fiction, and no objective validity ascribed to it, because we cannot see how things must of necessity agree with an image of them, which we make spontaneously and previous to our perception of them. But if this image, or rather this formal intuition, is the essential property of our sensibility, by means of which alone objects are given to us, and if this sensibility represents not things in themselves, but phenomena—then it is very easy to comprehend, and at the same time to prove indisputably, that all the external objects of our world of sense must necessarily accord strictly with the propositions of geometry; because the sensibility by means of its form of external intuition (in other words, by space, with which the geometer is occupied), first of all makes those objects possible as mere appearances. It will always remain a remarkable feature in the history of philosophy, that there was once a time, when even mathematicians, who were philosophers too, began to doubt, not of the accuracy of their geometrical propositions so far as they concerned space, but of the objective validity and the applicability of this concept itself, and of all its determinations, to nature. They were apprehensive that a line in nature might consist of physical points, and consequently that true space in the object might consist of simple parts, though the space, which the geometer has in his mind cannot be such. They did not recognise that this mental space makes the physical space, that is, the extension of matter, even possible—that this pure space is not at all a quality of things in themselves, but a form of our sensuous faculty of representation—and that all objects in space are mere phenomena, that is, not things in themselves but representations of our sensuous intuition. Space therefore as the geometer conceives it, is strictly the form of sensuous intuition which we find *a priori* in us, and contains the ground of the possibility of all external phenomena (as to their form), so that these must necessarily and accurately agree with the propositions of the geometer, which he draws not from any imaginary concept, but from the subjective basis of all external phenomena, which is the sensibility itself. In this and no other way can Geometry be secured (as to the undoubted objective reality of its propositions) from all the juggling of shallow Metaphysic, however surprising it may seem to this science, because it has not reverted to the sources of its concepts.

REMARK II.

Whatever is given us as object, must be given us in intuition. All our intuition however takes place by means of the senses only; the understanding intuites nothing, but only reflects.[1] And as we have just shown that the senses never and in no manner enable us to know things in themselves, but only their phenomena, which are mere representations of the sensibility, we conclude that 'all bodies, together with the space in which they are, must be considered nothing but mere representations in us, and exist nowhere but in our thoughts.' You will say: Is not this manifest idealism?

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[1] This, and a dozen other such passages, should have kept Mr. Lewes (*Hist. of Phil.* ii. p. 515) from putting the vaguely-worded question: 'Did Kant mean that man has intuitive Reason?' and still more from answering it in exactly the reverse way to what Kant would have done. M. [illegible] p. 150.

Idealism consists in the assertion, that there are none but thinking beings, all other things, which we think are perceived in intuition, being nothing but representations in the thinking beings, to which no object external to them really corresponds. Whereas I say, that things as objects of our senses existing outside us are given, but we know nothing of what they may be in themselves, knowing only their phenomena, that is, the representations which they cause in us by affecting our senses. Consequently I grant by all means that there are bodies without us, that is things, which though quite unknown to us as to what they are in themselves, we yet know by the representations which their influence on our sensibility procures us, and which we call bodies, a term signifying merely the appearance of the thing which is unknown to us, but not therefore less real.[1] Can this be termed idealism? It is the very contrary.

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[1] This statement is more explicit than anything in the *Critick*, and settles the question as to Kant's supposed idealism. Had

All this had been generally assumed and granted long before Locke's time, and still more generally ever since—that, without detriment to the actual existence of external things, many of their predicates may be said to belong not to the things in themselves, but to their phenomena, and to have no proper existence outside our representation. Heat, colour, and taste, for instance, are of this kind. But that I should go farther, and rank as mere phenomena, for weighty reasons, the remaining qualities of bodies also, which are called primary, such as extension, place, and in general space, with all which belongs to it (impenetrability or materiality, figure, &c.)—against this proceeding, no one can contend with any reason that it is inadmissible. As little as the man who admits colours not to be properties of the object in itself, but only modifications of the sense of seeing, can on that account be named an idealist, so little can my system be named idealistic, merely because I find *that more, nay that all the properties which constitute the intuition of a body*, belong merely to its phenomenon; for the existence of the thing that appears is thereby not destroyed, as in true idealism, but it is only shown, that we cannot possibly know it by the senses as it is in itself.

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his First Edition really differed from this exposition, he would never have suggested to his readers a comparison with the Second. M.

I should be glad to know what my assertions must be in order to avoid all idealism. I suppose I must say, not only that the representation of space is perfectly conformable to the relation which our sensibility has to objects—for that I have said—but also that it is quite similar to them; an assertion in which I can find as little meaning as if I said that the sensation of red has a similarity to the property of vermilion, which excites this sensation in me.

REMARK III.

Hence we may at once obviate an easily foreseen but worthless objection, 'that by admitting the ideality of space and of time the whole sensible world would be turned into mere illusion.' For men had at first spoiled all philosophical insight into the nature of sensuous cognition, by making the sensibility merely a confused mode of representation, according to which we still know things as they are, but without being able to bring everything in this our representation to a clear consciousness; whereas we had proved, that sensibility consists not in this logical distinction of clearness and obscurity, but in the genetical one of the origin of cognition itself. For sensuous cognition represents things not at all as they are, but only the mode in which they affect our senses, and consequently by it phenomena only and not things themselves are given to the understanding for reflection. After this necessary correction, an objection is mooted arising from an unpardonable and almost intentional misconception, as if my system turned all the things of the world of sense into mere illusion.

When an appearance is given us, we are still quite free as to our judgment on the matter. The phenomenon depends upon the senses, but the judgment upon the understanding, and the only question is, whether in the determination of the object there is reality or not. But the difference between reality and dreaming is not ascertained by the nature of the representations, which are referred to objects (for they are the same in both cases), but by their connexion according to those rules, which determine the coherence of the representations in the concept of an object, and by ascertaining whether they can subsist together in experience or not. And it is not the fault of the phenomena if our cognition takes illusion for reality, that is, if the intuition, by which an object is given us, is considered a concept of the thing or of its existence also, which the understanding can only think. The senses represent to us the paths of the planets as now forward, now backward, and herein is neither falsehood nor truth, because as long as we hold this path to be nothing but appearance, we do not judge of the objective nature of their motion. But as a false judgment may easily arise when the understanding does not carefully guard against this subjective mode of representation being considered objective, we say they appear to move backward; it is not the senses however which are charged with the illusion, but the understanding, whose province alone it is to give an objective judgment on the phenomenon.

Thus even if we did not at all reflect on the origin of our representations, and [merely] connect our intuitions of sense (whatever they may contain), in space and in time, according to the rules of the coherence of all cognition in experience, [still] illusion or truth may arise according as we are negligent or careful; it is merely a question of the use of sensuous representations in the understanding, and not of their origin. Again—when I consider all the representations of the senses, together with their form, space and time, to be nothing but appearances, and space and time to be a mere form of the sensibility, which is not to be met with in objects out of it, and when I make use of these representations in reference to possible experience only—there is nothing therein that can lead to error, nor is there any illusion implied in my holding them mere phenomena; for they can notwithstanding cohere rightly according to rules of reality in experience. Thus all the propositions of geometry hold good of space as well as of all the objects of the senses, consequently of all possible experience, whether I consider space as a mere form of the sensibility, or as something cleaving to the things themselves. It is only in the former case that I can comprehend how it is possible to know these propositions of all the objects of external intuition *a priori;* everything else which regards all possible experience remains just as if I had not seceded from the common opinion.

But if I venture to go beyond all possible experience with my notions of space and time, which I cannot avoid doing if I proclaim them qualities which adhere to things in themselves; (for what can prevent my letting them hold good of the same things, however my senses might be changed, and whether they were suited to them or not?) then a grave error resting upon an illusion may arise. For I proclaim to be universally valid what is merely a subjective condition of the intuition of things and sure for all objects of sense, but therefore only valid for all possible experience; since in doing so, I refer this condition to things in themselves, and do not limit it to the conditions of experience.

My theory of the ideality of space and of time, therefore, so far from reducing the whole sensible world to mere illusion, is rather the only means of securing the application of one of the most important cognitions (that which mathematic propounds *a priori,*) to real objects, and of preventing its being regarded mere illusion. For without this observation it would be quite impossible to make out whether the intuitions of space and time, which we borrow from no experience, and which yet lie in our representation *a priori*, are not mere chimeras of our brain, to which no object whatever corresponds, at least adequately, and consequently whether geometry itself is not a mere illusion, whereas we have been able to show its unquestionable validity with regard to all the objects of the sensible world because they are mere phenomena.

Secondly: These my principles, because they make phenomena of the representations of the senses, are so far from turning the truth of experience into mere illusion, that they are rather the only means of preventing the transcendental illusion, by which Metaphysic has hitherto been deceived, and led to the childish endeavour of catching at bubbles, while phenomena, which are mere representations, were taken for things in themselves—an error which gave occasion to the remarkable Antinomy of Reason that I shall mention by and by, and which is destroyed by the single observation, that appearance, as long as it is used in experience, produces truth, but the moment it transgresses the bounds of experience, and consequently becomes transcendent, produces nothing but illusion.

As I therefore leave to things as we obtain them by the senses their reality,—and only limit our sensuous intuition of these things to this, that they represent in no respect, not even in the pure intuitions of space and of time, anything more than mere appearances of those things, but never their constitution in themselves—this is not a thoroughgoing illusion invented for nature by me. My protestation too against all charges of idealism is so valid and clear as even to seem superfluous, were there not incompetent judges, who, while they would have an old name for every deviation from their perverse though common opinion, and never judge of the spirit of philosophic nomenclature, but cling to the letter only, are ready to put their own conceits in the place of well-determined notions, and thereby deform and distort them. For my having given this my theory the name of transcendental idealism, can authorise no one to confound it with the empirical idealism of Descartes, though this was only an insoluble problem, owing to which he thought every one at liberty to deny the existence of the corporeal world, as it never could be proved satisfactorily. Nor [does it justify a confusion] with the mystical and visionary idealism of Berkeley, against which and other similar chimeras our Critick rather contains the proper antidote. For my idealism concerns not the existence of things (the doubting of which however constitutes idealism in the ordinary sense), since it never came into my head to doubt them,[1] but it concerns the sensuous representation of things, to which space and time especially belong. Of these, consequently of all *phenomena* in general, I have only shown, that they are neither things (nor determinations belonging to things in themselves) but mere species of representation. But the word 'transcendental,' which with me means a reference of our cognition not to things, but only to the *cognitive faculty*, was meant to obviate this misconception. Yet rather than give farther occasion to it by this word, I now retract it, and desire this idealism of mine to be called critical. But if it be really an objectionable idealism to convert real things (not phenomena) into mere representations, by what denomination shall we distinguish that idealism which conversely makes things of mere representations? It may, I think, be called *dreaming* idealism, in contradistinction to the former, which may be called *visionary*, both of which are to be obviated by my transcendental, or better *critical* idealism.

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[1] I recommend the school of Kuno Fischer to consider this plain utterance. M.

SECOND PART OF THE GENERAL TRANSCENDENTAL PROBLEM.

How is the Pure Science of Nature [Physic] possible.

§ 14. NATURE is the *existence* of things, so far as it is determined according to universal laws. Should nature signify the existence of things *in themselves*, we could never cognise nature either *a priori*, or *a posteriori*. Not *a priori*, for how can we know what belongs to things in themselves, since this never can be done by the dissection of our concepts (analytical judgments)? For we do not want to know what is contained in our concept of a thing (for this [content] belongs to its logical being), but what is in the reality of the thing superadded to our concept, and by what the thing itself is determined in its existence outside the concept. Our understanding, and the conditions on which alone it can connect the determinations of things in their existence, do not prescribe any rule to things themselves; these do not conform to our understanding, but it must conform itself to them; they must therefore be first given us in order to gather these determinations from them, wherefore they would not be cognised *a priori*.

A cognition of the nature of things in themselves *a posteriori* would be equally impossible. For, if experience is to teach us *laws*, to which the existence of things is subject, these laws, if they regard things in themselves, must belong to them *of necessity* even outside our experience. But experience teaches us what exists and how it exists, but never that it must exist so and not otherwise necessarily. Experience therefore can never teach us the nature of things in themselves.

§ 15. We nevertheless really possess a pure science of nature in which are propounded, *a priori* and with all the necessity requisite to apodictical propositions, laws to which nature is subject. I need only call to witness that propaedeutic of Physic, which under the title of the universal Science of Nature, precedes all Physic (which is founded upon empirical principles). In it are found Mathematic applied to phenomena, and also merely discursive principles (or those derived from concepts), which constitute the philosophical part of the pure cognition of nature. But there are several things in it, which are not quite pure and independent of empirical sources: such as the concept of *motion*, that of *impenetrability* (upon which the empirical concept of matter rests), that of *inertia* and many others, which prevent its being called a perfectly pure science of nature. Besides, it only refers to objects of the external sense, and therefore does not give an example of a universal science of nature, in the strict sense, for such a science must reduce nature in general, whether it regards the object of the external or that of the internal sense (the object of the physics as well as psychology), to universal laws. But among the principles of this universal Physic there are a few which really have the required universality; for instance the propositions, that *substance is permanent*, and that *every event is* always previously *determined by a cause* according to constant laws, &c. These are actually universal laws of nature, which subsist completely *a priori*. There is then really a pure science of nature, and the question arises, *how is it possible?*

§ 16. The word *nature* assumes yet another meaning, which determines the *object*, whereas it (nature) in the former [formal] sense only denotes the *regularity* of the determinations of the existence of things generally. Nature then considered materially is *the complex of all the objects of experience.* And with this only are we now concerned, for besides, things which can never be objects of experience, if they must be cognised as to their nature, would oblige us to have recourse to concepts, whose meaning could never be given *in concreto* (by any example of possible experience). Consequently we must form for ourselves a list of concepts of their nature, the reality whereof—that is, whether they really refer to objects, or are mere creatures of thought—could never be determined. The cognition of what cannot be an object of experience would be hyperphysical, and concerning this the subject of our present discussion has nothing to say, but only concerning the cognition of nature, the reality of which [cognition] can be confirmed by experience, though it is possible *a priori* and precedes all experience.

§ 17. The *formal* [side] of nature in this narrower sense is therefore the subjection to law of all the objects of experience, and so far as it is cognised *a priori*, their *necessary* subjection. But it has been just shown, that the laws of nature can never be cognised *a priori* in objects so far as they are considered not in reference to possible experience, but as things in themselves. And our inquiry here extends not to things in themselves (the properties of which we pass by), but to things as objects of possible experience, and the aggregate of these is what we properly designate as nature. And now I ask, when the possibility of a cognition of nature *a priori* is in question, whether it is better to arrange the problem thus: how could we cognise *a priori* that *things* as objects of experience are necessarily subject to law? or thus: how is it possible to cognise *a priori* the necessary legitimacy [Gesetzmässigkeit] of *experience* itself as regards all its objects generally?

When examined, the solution of the problem, represented in either way, amounts, with regard to the pure cognition of nature (which is the real point at issue), entirely to the same thing. For the subjective laws, under which alone an empirical cognition of things is possible, hold good of these things, as objects of possible experience (not as things in themselves, which are not considered here). It is quite the same whether I say: without the law, that when an event is perceived, it is always referred to something that precedes, which it follows according to a universal rule, [without this law] a perceptive judgment never can rank as experience; or whether I express myself thus: all, of which experience teaches that it happens, must have a cause.

It is however better to choose the first formula. For we can *a priori* and previous to all given objects have a cognition of those conditions, on which alone experience with regard to such objects is possible, but never of the laws to which they may in themselves be subject, without reference to possible experience. We cannot therefore study the nature of things *a priori* otherwise than by investigating the conditions and the universal (though subjective) laws, under which alone such a cognition as experience (as to mere form) is possible, and we determine accordingly the possibility of things, as objects of experience. For if I should choose the second formula, and seek the conditions *a priori*, on which nature as an *object* of experience is possible, I might easily fall into error, and fancy that I was speaking of nature as a thing in itself, and then be endlessly toiling in search of laws for things of which nothing is given me.

Consequently we shall here be concerned with experience only, and the universal conditions given *a priori* of its possibility, and we shall thence determine nature as the whole object of all possible experience. I think it will be understood that I here do not mean the rules of the *observation* of a nature that is already given, for these already presuppose experience; that I do not therefore mean how we (by experience) can learn from nature her laws; for these would not then be laws *a priori*, and would yield us no pure science of nature; but [I mean to inquire] how the conditions *a priori* of the possibility of experience are at the same time the sources from which all the universal laws of nature must be derived.

§ 18. We must then in the first place observe, that, though all judgments of experience are empirical—that is, have their ground in the immediate perception of the senses—all empirical judgments are not therefore conversely judgments of experience, but that, besides the empirical and in general besides what is given to the sensuous intuition, particular concepts must yet be superadded, concepts which have their origin quite *a priori* in the pure understanding, and under which every perception must be first of all subsumed and then by their means changed into experience.

Empirical judgments, so far as they have objective validity, are JUDGMENTS OF EXPERIENCE; but those which are *only subjectively valid,* I name mere JUDGMENTS OF PERCEPTION. The latter require no pure concept of the understanding, but only the logical connexion of perception in a thinking subject. But the former always require, besides the representations of the sensuous intuition, particular *concepts originally begotten in the understanding,* which produce the objective validity of the judgment of experience.

All our judgments are at first mere perceptive judgments, they hold good merely for us (that is, for our subject), and we do not till afterwards give them a new reference (to an object), and desire that they shall always hold good for us and alike for everybody else; for when a judgment agrees with an object, all judgments concerning the same object must likewise agree among themselves, and thus the objective validity of the judgment of experience signifies nothing else than its necessary universality of application. And conversely when we have reason to consider a judgment necessarily universal (which never depends upon perception, but upon the pure concept of the understanding, under which the perception is subsumed), we must consider it objective also, that is, that it expresses not merely a reference of our perception to a subject, but a quality of the object. For there would be no reason for the judgments of other men necessarily agreeing with mine, if it were not the unity of the object to which they all refer, and with which they accord; hence they must all agree with one another.

§ 19. Objective validity therefore and necessary universality (for everybody) are equivalent notions, and though we do not know the object in itself, yet when we consider a judgment as universal, and also necessary, we understand it to have objective validity. By this judgment we cognise the object (though it remains unknown as it is in itself) by the universal and necessary connexion of the perceptions given to us. As this is the case with all objects of sense, judgments of experience take their objective validity not from the immediate cognition of the object (which is impossible), but from the condition of universal validity in empirical judgments, which, as already said, never rests upon empirical, or in short, sensuous conditions, but upon a pure concept of the understanding. The object *per se* always remains unknown; but when by the concept of the understanding the connexion of the representations of the object, which are given to our sensibility, is determined as universally valid, it (the object) is determined by this relation, and the judgment is objective.

To illustrate the matter: that the room is warm,[1] sugar sweet, and wormwood bitter—these are merely subjectively-valid judgments. I by no means require, that I or every other person shall always find them true as I now do; they only express a reference of two sensations to the same subject, to myself, and that only in my present state of perception; consequently they are not valid of the object; such judgments I have named those of perception. Judgments of experience are of quite a different nature. What experience teaches me under certain circumstances, it must always teach me and every body, and its validity I do not limit to the subject or to its state at a particular time. Hence I pronounce all such like judgments objectively valid. For instance, when I say the air is elastic, this judgment is as yet a judgment of perception only, I do nothing but refer two of my sensations to one another. But, if I would have it called a judgment of experience, I require this connexion to stand under a condition, which makes it universally valid. I desire therefore

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[1] I concede at once that these examples do not represent such judgments of perception, as ever could become judgments of

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experience, even though a concept of the understanding were superadded, because they refer merely to feeling, which everybody knows to be merely subjective, and which of course can never be attributed to the object, and consequently never become objective. I only wished at present to give an example of a judgment that is merely subjectively valid and contains in itself no ground for universal validity and thereby for a reference to the object. An example of the judgments of perception, which become judgments of experience by superadded concepts of the understanding, will be given in the next note.

that I and everybody else should always conjoin necessarily the same perceptions under the same circumstances.

§ 20. We must consequently analyse experience in general, in order to see what is contained in this product of the senses and of the understanding, and how the judgment of experience itself is possible. The foundation is conscious intuition, that is, perception (*perceptio*), which pertains merely to the senses. But in the next place judging also (which belongs only to the understanding) pertains to experience. But this judging may be twofold, first, in that I merely compare perceptions and conjoin them in a consciousness of my [particular] state, or secondly, in that I conjoin them in consciousness generally. The former judgment is merely a judgment of perception, and so far of subjective validity only, it is merely a connexion of perceptions in my [present] mental state, without reference to the object. Hence it is not, as is commonly imagined, enough for experience to compare perceptions and to connect them in consciousness through the [comparative] judgment; there thus arises no universality and necessity of the judgment, by which alone it can be objectively valid and [become] experience.

Quite another judgment therefore is required before perception can become experience. The given intuition must be subsumed under a concept, which determines the form of judging in general relatively to intuition, connects its empirical consciousness in consciousness generally, and thereby procures universal validity for empirical judgments; a concept of this nature is a pure *a priori* concept of the Understanding, which does nothing but determine for an intuition the general way in which it can serve for [the process of] judging. Suppose the concept of cause to be such, and it determines the intuition which is subsumed under it, *e.g.* that of air, relative to judging in general, so that the concept of air serves with regard to [its] expanding [itself] in the relation of the antecedent to the consequent in a hypothetical judgment. The concept of cause then is a pure concept of the understanding, which is totally distinct from all possible perception, and only serves to determine the representation contained under it, relatively to judging in general, and so to make a universally valid judgment possible.

Before, therefore, a judgment of perception can become a judgment of experience, it is requisite that the perception should be subsumed under such a concept of the understanding as we have been describing; for instance, air ranks under the concept of causes, which determines our judgment about it in regard to [its] extending [itself] as hypothetical.[1]

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[1] As an easier example, we may take the following: 'When the sun shines on the stone, it grows warm.' This judgment,

But this extension [extending] is thereby represented not as merely belonging to my perception of the air in my present state or in many of my states or in the state of perception of others, but as belonging to this perception *of necessity*. So this judgment, 'the air is elastic,' becomes universally valid, and a judgment of experience, only by certain judgments preceding it, which subsume the intuition of air under the concept of cause and effect: and they thereby determine the perceptions not merely as regards one another in me, but relatively to the form of judging in general (here the hypothetical), and in this way they render the empirical judgment universally valid.[1]

If all our synthetical judgments are analysed so far as they are objectively valid, it will be found that they never consist of mere intuitions connected only (as is commonly believed), by comparison

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however often I and others may have perceived it, is a mere judgment of perception, and contains no necessity; perceptions are only usually conjoined in this manner. But if I say, 'The sun *warms* the stone,' I add to the perception the understanding-concept [Verstandesbegriff] of cause, which *necessarily* connects with the concept of sunshine that of heat, and the synthetical judgment becomes of necessity universally valid, consequently objective and is converted from a perception into experience.

[1] In the above difficult paragraph, I have translated *Ausspannung* and *Ausdehnung* in a dynamical and not in a statical sense, according to Dr. Toleken's suggestion. It is certainly an illustration of *obscurum per obscurius*, if taken in any other way. M.

in a judgment; but that they would be impossible were not a pure concept of the understanding superadded to the concepts abstracted from intuition, under which concept these latter are subsumed, and in this manner only connected in an objectively valid judgment. Even the judgments of the pure Mathematic in their simplest axioms are not exempt from this condition. The principle, 'a straight line is the shortest between two points,' presupposes that the line is subsumed under the concept of quantity, which certainly is no mere intuition, but has its seat in the understanding alone, and serves to determine the intuition (of the line) with regard to the judgments which may be made about it, relatively to their quantity, that is, to plurality (as *judicia plurativa*).[1] For under them it is understood, that in a given intuition there is contained a plurality of homogeneous parts.

§ 21. In order therefore to show the possibility of experience so far as it rests upon pure concepts of the understanding *a priori*, we must first represent what belongs to judging generally, and the various states of the understanding in [performing] it, in a complete table. For the pure understanding-concepts must run parallel to these states, as such concepts are nothing more than concepts of intuitions in general so far as these are determined by one or other of these ways of judging, in themselves, that is necessarily and universally. Hereby also the *a priori* principles of the possibility of all experience, as of an objectively valid empirical cognition, will be precisely determined. For they are nothing but propositions by which all perception is (under certain universal conditions of intuition) subsumed under those pure concepts of the understanding.

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[1] I prefer this name for the judgments, which are termed *particular* in logic. For the word particular seems to imply the notion that they are not universal. But when I begin from unity (in singular judgments) and so proceed to universality, I must not imply any reference to universality: I think of plurality merely without universality, not as its exception. This distinction is necessary, if logical distinctions [Momente] are to afford the basis of the pure concepts of the understanding; in logical use the matter is not worth changing.

Logical Table of Judgments.

1.

As to Quantity.

Universal.
Particular [plurative].
Singular.

2.

As to Quality.

Affirmative.
Negative.
Infinite.

3.

As to Relation.

Categorical.
Hypothetical.
Disjunctive.

4.

As to Modality.

Problematical.
Assertorial.
Apodictical.

Transcendental Table of the Pure Concepts of the Understanding.

1.

As to Quantity.

Unity (the Measure).
Plurality (the Quantity).
Totality (the Whole).

2.

As to Quality.

Reality.
Negation.
Limitation.

3.

As to Relation.

Substance.
Cause.
Community.

4.

As to Modality.

Possibility.
Existence.
Necessity.

Pure Physiological Table of the Universal Principles of the Science of Nature.

1.

Axioms of Intuition.

2.

Anticipations of Perception.

3.

Analogies of Experience.

4.

Postulates of Empirical Thinking in general.

§ 22. In order to comprise the whole matter in one notion, it is first necessary to remind the reader that we are discussing not the origin of experience, but that which lies in experience. The former pertains to empirical psychology, and would even then never be adequately explained without the latter, which belongs to the critick of cognition, and particularly of the understanding.

Experience consists of intuitions, which pertain to the sensibility, and of judgments which are entirely a work of the understanding. But the judgments, which the understanding forms entirely from sensuous intuitions, are far from being judgments of experience. For in the one case the judgment connects only the perceptions as they are given in the sensuous intuition, but in the other the judgments are to express what experience in general, and not what the mere perception, with its subjective validity, contains. The judgment of experience must therefore add to the sensuous intuition and its logical connexion in a judgment (after it has been made universal by comparison) something that determines the synthetical judgment as necessary and therefore as universally valid. This can be nothing else, than that concept which represents the intuition as determined in itself with regard to one form of judgment rather than another,[1] which [form] is a concept of that synthetical unity of intuitions, which can only be represented by a given logical function of judgments.

§ 23. The sum of the matter is this: the business of the senses is to intuite, that of the understanding is to think. But thinking means uniting representations in one consciousness. This union is either merely relative to the [individual] subject, and is contingent and subjective, or is absolute, and is necessary or objective. The union of representations in one consciousness is judgment. Thinking therefore is the same as judging, or referring representations to judgments in general. Hence judgments are either merely subjective, when representations are referred to a consciousness in one subject only and united in it, or objective, when they are united in a consciousness generally, that is, necessarily. The logical phases [Momente] of all judgments are but various modes of uniting representations in consciousness. But if they serve for concepts, they are concepts of their *necessary* union in a consciousness, and so principles of objectively valid judgments. This union in a consciousness is either analytical, by identity, or synthetical, by the combination and addition of various representations one to another. Experience consists in the synthetical connexion of phenomena (perceptions) in consciousness, so far as this connexion is necessary. Hence the pure concepts of the understanding are those, under which all perceptions must be subsumed ere they can serve for judgments of experience, in which the synthetical unity of the perceptions is represented as necessary and universally valid.[1]

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[1] I read *anderen*, being unable to translate *andere* of Rosencrantz' Edition.

§ 24. So far as judgments are merely considered the condition of the union of given representations in a consciousness, they are rules. These rules, so far as they represent the union as necessary, are rules *a priori*, and so far as they cannot be deduced from higher rules, are fundamental principles. But in regard to the possibility of all experience, merely in relation to the form of thinking in it, no conditions of experience-judgments are higher then those which bring the phenomena, according to the various form of their intuition, under pure concepts of the understanding, and render the empirical judgment objectively valid. These concepts are therefore the *a priori* principles of possible experience.

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[1] But how does this proposition, 'that judgments of experience contain necessity in the synthesis of perceptions,' agree with my statement so often before inculcated, that experience as cognition *a posteriori*, can afford contingent judgments only?' When I say, that experience teaches me something, I mean [by experience] only the perception that lies in it, for example, that heat always follows the shining of the sun on a stone; consequently the proposition of experience is always so far contingent. That this heat necessarily follows the shining of the sun, is contained indeed in the judgment of experience (by means of the concept of cause), yet is a fact not learned by experience; for conversely, experience is first of all generated by this addition of the concept of the understanding (of cause) to perception. How perception attains this addition may be seen by referring in the *Critick* itself to the section on the Transcendental faculty of Judgment.

The principles of possible experience are then at the same time universal laws of nature, which can be cognised *a priori.* And thus the problem in our second question, *How is the pure Science of Nature possible?* is solved. For the system which is required for the form of a science, is to be met with in perfection here, because, beyond the above-mentioned formal conditions of all judgments in general (viz., of all the general rules of logic), no others are possible, and these constitute a logical system. The concepts grounded thereupon, which contain the *a priori* conditions of all synthetical and necessary judgments, accordingly constitute a transcendental system. Finally the principles, by means of which all phenomena are subsumed under these concepts, constitute a physiological system, that is, a system of nature, which precedes all empirical cognition of nature, makes it even possible, and hence may in strictness be denominated the universal and pure science of nature.

§ 25. The first[1] of the physiological principles subsumes all phenomena, as intuitions in space and time, under the concept of *Quantity*, and is so far a principle of the application of Mathematic to experience. By the second that which is empirical, or sensation, which denotes what is real in phenomena, is not indeed directly subsumed under the concept of *quantity*, because sensation is not an intuition that *contains* either space or time, though it places the object related to itself in both. But still there is between reality (sensible representation) and nothing, or the total void of intuition in time, a difference which has a quantity. For between every given degree of light and of darkness, between every degree of heat and of absolute cold, between every degree of weight and of absolute lightness, between every degree of occupied space and of totally void space, diminishing degrees can be conceived, in the same manner as between consciousness and total unconsciousness (psychological obscurity) ever diminishing degrees find their place. Hence there is no perception that can prove an absolute want; for instance, no psychological obscurity that cannot be considered as a [weaker] consciousness, which is only outbalanced by a stronger consciousness. This occurs in all cases of sensation, and so the understanding can anticipate even sensations, which constitute the peculiar quality of empirical representations (phenomena), by means of this principle: that they all have (consequently that what is real in all phenomena has) a degree. Here is the second application of Mathematic (*mathesis intensorum*) to the science of nature.

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[1] Without referring to what the *Critick* itself says on the subject of the Principles, the three following paragraphs will not be well understood; they may however be of service in giving a general view of the Principles, and in fixing the attention on the main points.

§ 26. As to the Relation of phenomena, and indeed merely with a view to their existence, the determination is not mathematical, but dynamical, and can never be objectively valid, consequently never fit for experience, if it does not come under *a priori* principles by which the cognition of experience relative to phenomena becomes even possible. Hence phenomena must be subsumed under the concept of Substance, which is the foundation of all determination of existence, as a concept of the thing itself; or secondly—so far as a succession is found among phenomena, that is, an event—under the concept of an Effect with reference to Cause; or lastly—so far as coexistence is to be known objectively, that is, by a judgment of experience—under the concept of Community (action and reaction). Thus *a priori* principles form the basis of objectively valid, though empirical judgments, that is, of the possibility of experience so far as it must connect objects as existing in nature. These principles are the proper laws of nature, which may be termed dynamical.

And finally the cognition of the agreement and connexion not only of phenomena among themselves in experience, but their relation to experience in general, belongs to the judgments of experience. This relation [concerns] either their agreement with the formal conditions, which the understanding cognises, or their coherence with the materials of the senses and of perception, or combines both into one concept. Consequently it contains Possibility, Reality, and Necessity according to universal laws of nature; and this constitutes the physiological doctrine of method, or the distinction of truth and of hypotheses, and the bounds of the certainty of the latter.

§ 27. Yet it is not by any means the greatest merit of this third table of Principles drawn *from the nature of the understanding itself* after the critical method, that it shows an inherent perfection, which raises it far above every other, that has hitherto though in vain been tried or may yet be tried by analysing *things themselves* dogmatically. Nor is it [the chief merit] that the table exhibits all synthetical *a priori* principles completely and on one principle, viz. the faculty of judging in general, which constitutes the essence of experience as regards the understanding, so that we can be certain that there are no more such like principles—a satisfaction, which the dogmatical method never can afford.

The ground of proof must be carefully noticed, as it shows the possibility of this cognition *a priori*, and at the same time limits all such principles to a condition, which must never be forgotten, if we desire them not to be misunderstood, and extended in use beyond the original sense which the understanding attaches to them. This limit is, that they contain nothing but the conditions of possible experience in general so far as it is subjected to laws *a priori.* Consequently I do not say, that things *in themselves* possess a quantity [that], their reality [has] a degree, their existence a connexion of accidents in a substance, &c.; for this nobody can prove, because such a synthetical connexion from mere concepts, without any reference to sensuous intuition on the one side, or connexion of it in a possible experience on the other, is absolutely impossible. The essential limitation of the concepts in these principles then is: That all things stand necessarily *a priori* under the afore-mentioned conditions, *as objects of experience only.*

Hence there follows secondly a specifically peculiar mode of proof of these principles: That they are not referred directly to phenomena and their relation, but to the possibility of experience, of which phenomena constitute the matter only, not the form. Thus they are referred to objectively and universally valid synthetical propositions, in which [features] judgments of experience are distinguished from those of perception. This takes place because phenomena, as mere intuitions, *which occupy a part of space and time,* come under the concept of Quantity, which unites their multiplicity *a priori* according to rules synthetically: because so far the perception contains, besides intuition, sensation, between which and nothing, or its total disappearance, a transition by diminishing always occurs. Hence what is real in phenomena must have a Degree, so far as it does not itself *occupy any part of space or of time.*[1] Still the transition to it from empty time or space is only possible in time; consequently though sensation, as the quality of empirical intuition, can never be cognised *a priori*, by its specific difference from other sensations, yet it can, in a possible experience in general, as a quantity of perception be intensively distinguished from every other similar perception. Hence then the application of Mathematic to nature is rendered possible and determined, as regards the sensuous intuition by which nature is given to us.

But the reader must above all pay attention to the mode of proof of the principles which occur under the title of Analogies of experience. For these do not regard the generation of intuitions, like the principles of the application of mathematic to the science of nature generally, but regard the connexion of their existence in experience. This [connexion] can be nothing but the determination of their existence in time according to necessary laws, under which alone the connexion is objectively valid, and consequently becomes experience. The proof therefore does not turn on the synthetical unity in the connexion of *things* in themselves, but of *perceptions*, and of these not in regard to their matter, but to the determination of time and of the relation of their existence in it, according to universal laws. These universal laws, therefore, if the empirical determination in relative time is to be objectively valid (i. e. to be experience) contain the necessary determination of existence in time generally (consequently according to a rule of the understanding *a priori*). The reader has probably been long accustomed to consider experience a mere empirical synthesis of perceptions, and hence not to reflect, that it goes much farther than these extend, as it gives empirical judgments universal validity and for that purpose requires a pure unity of the understanding, which precedes *a priori*. In Prolegomena on this subject I can only recommend such readers to pay great attention to this distinction of experience from a mere aggregate of perceptions, and to judge the mode of proof from this point of view.

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[1] Heat and light are in a small space just as large (as to degree) as in a large one; in like manner the internal representations, pain, consciousness in general, whether they last a short or a long time, need not vary as to the degree. Hence the quantity is here in a point and in a moment just as great as in any space or time however great. Degrees are therefore capable of increase, but not in intuition, rather in mere sensation (or the quantity of the degree of an intuition). Hence they can only be estimated quantitatively by the relation of 1 to 0, that is, by their capability of decreasing by infinite intermediate degrees to disappearance or of increasing from nought through infinite gradations to a determinate sensation in a certain time. (*Quantitas qualitatis est gradus*).

§ 28. This is the proper place to remove Hume's difficulty. He justly maintains, that we can by no means see by reason the possibility of Causality, that is, of the reference of the existence of one thing to the existence of another, which is necessitated by the former. I add, that we comprehend just as little the concept of Subsistence, that is, the necessity that at the foundation of the existence of things there lies a subject which cannot itself be a predicate of any other thing; nay, we cannot even form a notion of the possibility of such a thing (though we can point out examples of its use in experience). The very same incomprehensibility affects the Community of things, as we cannot comprehend how from the state of one thing an inference to the state of quite another thing beyond it and *vice versa*, can be drawn, and how substances which have each their own separate existence should depend upon one another necessarily. But I am very far from holding these concepts to be derived merely from experience, and the necessity represented in them, to be imaginary and a mere illusion produced in us by long habit. On the contrary, I have amply shown, that they and the principles [derived] from them are firmly established *a priori*, or before all experience, and have their undoubted objective value, though only with regard to experience.

§ 29. I have indeed no notion of such a connexion of things in themselves, that they can either exist as substances, or act as causes, or stand in community with others (as parts of a real whole), and I can just as little conceive such properties in phenomena as such, because those concepts contain nothing that lies in the phenomena, but what the understanding alone must think. But we have a concept of such a connexion of representations in our understanding, and in judgments generally—a concept that representations appear in one sort of judgments as subject in relation to predicate, in another as reason in relation to consequence, and in a third as parts, which constitute together a total possible cognition. Besides we cognise *a priori* that without considering the representation of an object as determined in some of these respects, we can have no valid cognition of the object, and, if we should occupy ourselves about the object *per se*, there is no possible attribute, by which I could know that it is determined under any of these aspects, that is under the concept either of substance, or of cause, or (in relation to other substances) of community, for I have no notion of the possibility of such a connexion of existence [*per se*]. But the question is not how things in themselves, but how the empirical cognition of things is determined, as regards the above aspects of judgments in general, that is, how things, as objects of experience, can and shall be subsumed under these concepts of the understanding. And then it is clear, that I completely comprehend not only the possibility, but also the necessity of subsuming all phenomena under these concepts, that is, of using them for principles of the possibility of experience.

§ 30. Let us make an experiment with Hume's problematical concept (his *crux metaphysicorum*), the concept of cause. In the first place I am given *a priori*, by means of logic, the form of a conditional judgment in general, that is, one given cognition as antecedent and another as consequent. But it is possible, that in perception we may meet with a rule of relation, which runs thus: that a certain phenomenon is constantly followed by another (though not conversely), and this is a case for me to use the hypothetical judgment, and, for instance, to say, if the sun shines long enough upon a body, it grows warm. Here there is indeed as yet no necessity of connexion, or concept of cause. But I proceed and say, that if the [above] proposition, which is merely a subjective connexion of perceptions, is to be a judgment of experience, it must be considered as necessary and universally valid. Such a proposition would be, 'the sun is by its light the cause of heat.' The empirical rule is now considered as a law, and as valid not merely of phenomena, but valid of them for the purposes of a possible experience which requires thoroughly and therefore necessarily valid rules. I therefore easily comprehend the concept of cause, as a concept necessarily belonging to the mere form of experience, and its possibility as a synthetical union of perceptions in consciousness generally; but I do not at all comprehend the possibility of a thing generally as a cause, because the concept of cause denotes a condition not at all belonging to things, but to experience. It is nothing in fact but an objectively valid cognition of phenomena and of their succession, so far as the antecedent can be conjoined with the consequent according to the rule of hypothetical judgments.

§ 31. Hence too the pure concepts of the understanding, if they quit objects of experience and would refer to things in themselves (*noumena*), have no signification whatever. They serve, as it were, only to spell phenomena, that we may be able to read them as experience; the principles which arise from their reference to the sensible world, only serve our understanding for empirical use. Beyond this they are arbitrary combinations, without objective reality, and we can neither cognise their possibility *a priori*, nor verify their reference to objects or make it intelligible by any example; because examples can only be borrowed from some possible experience, consequently the objects of these concepts can be found nowhere but in a possible experience.

This complete (though to its originator unexpected) solution of Hume's problem preserves therefore to the pure concepts of the understanding their *a priori* origin, and to the universal laws of nature their validity, as laws of the understanding, yet so that their use is limited to experience, because their possibility depends solely on the reference of the understanding to experience; but not by deriving them from experience, but by deriving it from them, a completely reversed mode of connexion which never occurred to Hume.

This is therefore the result of all our foregoing inquiries: all synthetical principles *a priori* are nothing more than principles of possible experience, and can never be referred to things in themselves, but to phenomena as objects of experience. And hence pure mathematic as well as pure physic can never be referred to any thing more than mere phenomena, and can only represent either that which makes experience generally possible, or else that which, as it is derived from these principles, must always be capable of being represented in some possible experience.

§ 32. And thus we have at last something definite, upon which to depend in all metaphysical undertakings, which have hitherto attempted everything without distinction boldly enough, but always at random. It never struck dogmatical thinkers, that the aim of their exertions should be so proximate. It never struck even those, who, confident in their supposed sound common sense, started with concepts and principles of pure reason (which were legitimate and natural, but destined for mere empirical use) in quest of fields of knowledge [Einsichten], to which they neither knew nor could know any determinate bounds, because they had never reflected nor were able to reflect on the nature or even on the possibility of such a pure understanding.

Many a naturalist of pure reason (by which I mean the man who believes he can decide in matters of Metaphysic without any science) may pretend, that he long ago by the prophetic spirit of his sound sense, not only suspected, but knew and comprehended, what is here propounded with so much ado, or, if he likes, with prolix and pedantic pomp: 'that with all our reason we can never reach beyond the field of experience.' But when he is questioned about his rational principles individually, he must grant, that there are many of them which he has not taken from experience, and which are therefore independent of it and valid *a priori*. How then and on what grounds will he restrain both himself and the dogmatist, who makes use of these concepts and principles beyond all possible experience, because they are recognised independent of it? And even he, this adept in sound sense, in spite of all the cheaply acquired wisdom he arrogates to himself, is not so secure from [the danger of] wandering insensibly beyond objects of experience into the field of chimeras. He too is often deeply enough involved in them, though he gives a colour to his groundless pretensions by his popular language, in which he announces every thing as mere probability, rational conjecture, or analogy.

§ 33. Since the oldest days of philosophy inquirers into pure reason have conceived, besides the things of sense, or appearances (*phenomena*), which make up the sensible world, certain objects of the understanding[1] (*noumena*), which should constitute an intelligible world. And as appearance and illusion were by those men identified (a thing which we may well excuse in an undeveloped epoch), reality was only conceded to the noumena.

And we indeed, when, as is reasonable, we consider objects of sense as mere appearances, hereby confess that they are based upon a thing in itself, though we know not this thing as to its internal constitution, but only know its phenomena, viz.: the way in which our senses are affected by this unknown something. The understanding therefore, by assuming phenomena, grants the existence of things in themselves also, and so far we may say, that the representation of such beings as form the basis of phenomena, consequently of mere beings of the understanding, is not only admissible, but unavoidable.

Our critical deduction by no means excludes beings of that sort (*noumena*), but rather limits the principles of the Aesthetic to this, that they shall not extend to all things, as everything would then be turned into mere phenomenon, but that they shall only hold good of objects of possible experience. Hereby then objects of the understanding are granted, but with the inculcation of this rule which admits of no exception: 'that we neither know nor can know anything at all determinate of these pure objects of the understanding, because our pure concepts of the understanding as well as our pure intuitions extend to nothing but objects of possible experience, consequently to mere things of sense, and as soon as we leave this sphere these concepts retain no meaning whatever.'

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[1] Verstandes-wesen, using *object* in its vaguest sense. M.

§ 34. There is indeed something seductive in our pure concepts of the understanding, which tempts us to a transcendent use; I mean the use which transcends all possible experience. Not only are our concepts of substance, of power, of action, of reality, and others, quite independent of experience, containing no phenomenon of sense, and so apparently applicable to things in themselves (*noumena*), but, what strengthens this presumption, they contain a necessity of determination in themselves, which experience never attains. The concept of cause implies a rule, according to which one state follows another necessarily; but experience can only show us, that one state of things often, or at most, commonly, follows another, and therefore affords neither strict universality, nor necessity.

Hence the Categories seem to have a deeper meaning and import than can be exhausted by their empirical use, and so the understanding insensibly adds for itself to the house of experience a much more extensive wing, which it fills with nothing but creatures of thought, without ever observing that it has transgressed with its otherwise lawful concepts the bounds of their use.

§ 35. I was obliged therefore to institute two important, and even indispensable, though very dry investigations. In the one (*Critick*, p. 107) it is shown, that the senses furnish not the pure concepts of the understanding *in concreto*, but only the *schema* for their use, and that the object conformable to it occurs only in experience (as the production of the understanding from materials of the sensibility). In the other (*Critick*, p. 178) it is shown, that, although our pure concepts of the understanding and our principles are independent of experience, and despite of the apparently greater sphere of their use, still nothing whatever can be thought by them beyond the field of experience, because they can do nothing but merely determine the logical form of the judgment relatively to given intuitions. But as there is no intuition at all beyond the field of the sensibility, these pure concepts, as they cannot possibly be exhibited *in concreto*, are [then] totally without meaning; consequently all these *noumena*, together with their complex, the intelligible world,[1] are nothing but representations of a problem of which the object in itself is possible, but the solution, from the nature of our understanding, totally impossible. For our understanding is not a faculty of intuition, but of the connexion of given intuitions in experience. Experience must therefore contain all the objects for our concepts; but beyond it no concepts have any signification, as there is no intuition for their basis.

§ 36. The imagination may perhaps be forgiven for occasional extravagance, and for not keeping carefully within the limits of experience, since it at least gains life and vigour by such flights, and since it is always easier to moderate its boldness, than to stimulate its languor. But the understanding which ought to *think* can never be forgiven for substituting *extravagance*; for we depend upon it alone for assistance to set bounds, when necessary, to the extravagance of the imagination.

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[1] Not (as the usual expression is) *intellectual* world. For *cognitions* are *intellectual* through the understanding, and refer to our world of sense also; but *objects*, so far as they can be represented *merely by the understanding*, and to which none of our sensible intuitions can refer, are termed *intelligible*. But as some possible intuition must correspond to every object, we must conceive an understanding that intuites things immediately; but of such we have not the least notion, nor have we of the *things of understanding* [Verstandeswesen], to which it should be applied.

But the understanding begins its vagaries very innocently and modestly. It first separates the elementary cognitions, which inhere in it prior to all experience, but yet must always have their application in experience. It gradually drops these limits, and what is there to prevent it, as it has quite freely derived its principles from itself? And then it proceeds first to newly-imagined powers in nature, then to beings outside nature, in short to a world, for whose construction the materials cannot be wanting, because fertile fiction furnishes them abundantly, and though not confirmed, is never refuted, by experience. This is the reason that young thinkers are so partial to Metaphysic of the truly dogmatical kind, and often sacrifice to it their time and their talents, which might be otherwise better employed.

But there is no use in trying to moderate these fruitless endeavours of pure reason by all manner of cautions as to the difficulties of solving questions so occult, by complaints of the limits of our reason, and by degrading our assertions into mere conjectures. For, if their *impossibility* is not distinctly shown, and the *self-knowledge* of reason does not become a true science, in which the field of its right use is distinguished, so to say, with mathematical certainty from that of its worthless and idle use, these fruitless efforts will never be fully abandoned.

§ 37. *How is Nature itself possible?*

This question—the highest point that transcendental philosophy can ever reach, and to which, as its boundary and completion, it must proceed—properly contains two [subordinate] questions.

First: How is nature at all possible in the *material* sense, as to intuition, [I mean nature] considered as the complex of phenomena; how are space, time, and that which fills both—the object of sensation, in general possible? The answer is: By means of the constitution of our sensibility, according to which it is specifically affected by objects, which are in themselves unknown to it, and totally distinct from those phenomena. This answer is given in the *Critick* itself in the transcendental Aesthetic, and in these *Prolegomena* by the solution of the first general problem.

Secondly: How is nature possible in the formal sense, nature as the complex of the rules, under which all phenomena must come, in order to be thought as connected in experience? The answer must be this: It is only possible by means of the constitution of our understanding, according to which all the above representations of the sensibility are necessarily referred to a consciousness, and by which the peculiar way in which we think (that is, by rules) and hence experience also, are possible, but must be clearly distinguished from an insight into the objects in themselves. This answer is given in the *Critick* itself in the transcendental Logic, and in these *Prolegomena*, in the course of the solution of the second main problem.

But how this peculiar property of our sensibility itself is possible, or that of our understanding and of the apperception which is necessarily its basis and that of all thinking—this cannot be farther resolved or answered, because we require these [faculties] for all our answers and for all our thinking about objects.

There are many laws of nature, which we can only know by means of experience, but legitimacy in the connexion of phenomena, that is, nature in general, we cannot discover by any experience, because experience itself requires laws, which are *a priori* at the basis of its possibility.

The possibility of experience in general is therefore at the same time the universal law of nature, and the principles of the former (experience) are the very laws of the latter (nature). For we do not know nature but as the complex of the phenomena, that is, of representations in us, and hence can only derive the laws of its connexion from the principles of their connexion in us, that is, from the conditions of their necessary union in consciousness, which union constitutes the possibility of experience.

Even the main proposition expounded throughout this section—that universal laws of nature can be distinctly cognised *a priori*,—leads naturally to the proposition: that the highest legislation of nature must lie in ourselves (that is, in our understanding), and that we must not seek the universal laws of nature in nature by means of experience, but conversely must seek nature, as to its universal legitimacy, in the conditions of the possibility of experience, which lie in our sensibility and in our understanding. For how were it otherwise possible to know *a priori* these laws, as they are not rules of analytical cognition, but really synthetical extensions of it. Such a necessary agreement of the principles of possible experience with the laws of the possibility of nature, can only proceed from one of two reasons: either these laws are drawn from nature by means of experience, or conversely nature is derived from the laws of the possibility of experience in general, and is quite the same as the mere universal legitimacy of the latter. The former is self-contradictory, for the universal laws of nature can and must be cognised *a priori* (that is, independent of all experience), and be the foundation of all empirical use of the understanding; the latter alternative therefore alone remains.[1]

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[1] Crusius alone thought of a compromise: that a Spirit, who can neither err nor deceive, implanted these laws in us originally. But since false principles often intrude themselves, as indeed the very system of this man shows in not a few examples, we are involved in difficulties as to the use of such a principle in the

But we must distinguish the empirical laws of nature, which always presuppose particular perceptions, from the pure or universal laws of nature, which, without being based on particular perceptions, contain merely the conditions of their necessary union in experience. In relation to the latter, nature and *possible* experience are quite the same, and as the legitimacy here depends upon the necessary connexion of phenomena in experience (without which we cannot cognise any object whatever in the sensible world) consequently upon the original laws of the understanding, it seems at first strange, but is not the less certain, to say as regards the latter: *The understanding does not draw its laws (a priori) from nature, but prescribes them to it.*

§ 38. *a.* We shall illustrate this apparently daring proposition by an example, which will show, that laws, which we discover in objects of sensuous intuition (especially when these laws are cognised as necessary), are commonly held by us to be such as the understanding has placed in them, though they are similar in all points to the laws of nature, which we ascribe to experience.

b. If we consider the properties of the circle, by

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absence of sure criteria to distinguish the genuine origin from the spurious, as we never can know certainly what the Spirit of truth or the father of lies may have instilled into us.

which this figure unites so many arbitrary determinations of space in itself, and therefore in a universal rule, we cannot avoid attributing a nature to this geometrical thing. Two right lines, for example, which intersect one another and the circle, however they may be drawn, are always divided so that the rectangle under the segments of the one is equal to that under the segments of the other. The question now is: does this law lie in the circle or in the understanding, that is: does this figure, independently of the understanding, contain in itself the ground of the law, or does the understanding, having constructed according to its concepts (according to the equality of the radii) the figure itself, introduce into it this law of the chords cutting one another in geometrical proportion? When we follow the proofs of this law, we soon perceive, that it can only be derived from the condition on which the understanding founds the construction of this figure, and which is that of the equality of the radii. But, if we enlarge this concept, to pursue farther the unity of various properties of geometrical figures under common laws, and consider the circle as a conic section, which of course is subject to the same fundamental conditions of construction as other conic sections, we shall find, that all the chords, which intersect within the ellipse, parabola, and hyperbola, always intersect so that the rectangles under their segments are not indeed equal, but always bear a constant ratio to one another [the directions of the chords being fixed. If we proceed still farther, to the fundamental laws of physical astronomy, we find a physical law of reciprocal attraction diffused over all material nature, the rule of which attraction is: 'that it decreases inversely as the square of the distance from each attracting point, that is, as the spherical surfaces, over which this power diffuses itself, increase,' which law seems to be necessarily inherent in the very nature of things, and hence is usually propounded as cognoscible *a priori*. Simple as the sources of this law are, merely resting upon the relation of spherical surfaces of different radii, its consequences are so valuable with regard to the variety of their agreement and its regularity, that not only all possible orbits of the celestial bodies [are described] in conic sections, but such a relation of these bodies among one another results, that no other law of attraction, than that of the inverse square of the distance, can be imagined as fit for a cosmical system.

Here then is a Nature that rests upon laws which the understanding cognises *a priori*, and chiefly from the universal principles of the determination of space. And the question now is: Do the laws of nature lie in space, and does the understanding learn them by merely endeavouring to find out the fruitful meaning that lies in space; or do they inhere in the understanding and in the way, in which it determines space according to the conditions of the synthetical unity in which its concepts are all centred? Space is something so uniform and as to all particular properties so indeterminate, that we should certainly not seek a store of laws of nature in it. Whereas that which determines space to the form of a circle or to the figures of a cone and a sphere, is the understanding, so far as it contains the ground of the unity of their constructions. The mere universal form of intuition, called space, must therefore be the substratum of all intuitions determinable to particular objects, and in it of course the condition of the possibility and of the variety of these intuitions lies. But the unity of the objects is entirely determined by the understanding, and on conditions which lie in its own nature, and thus the understanding is the origin of the universal order of nature, in that it comprehends all appearances under its own laws, and thereby first constructs, *a priori*, experience (as to its form), by means of which whatever is to be cognised only by experience, is subjected to its laws necessarily. For we are not now concerned with the nature of things in themselves, which is independent of the conditions both of our sensibility and our understanding, but with nature, as an object of possible experience, and in this case the understanding, whilst it makes experience possible, thereby insists that the sensuous world is either not an object of experience at all, or must be Nature.

APPENDIX TO THE PURE SCIENCE OF NATURE.

§ 39. *Of the System of the Categories.*

THERE can be nothing more desirable to a philosopher, than to be able to derive the scattered multiplicity of the concepts or the principles, which had occurred to him in concrete use, from a principle *a priori*, and to unite every thing in this way in one cognition. He formerly only believed that those things, which remained after a certain abstraction, and seemed by comparison among one another to constitute a particular kind of cognitions, were completely collected; but this was only an *Aggregate*. Now he knows, that just so many, neither more nor less, can constitute the mode of cognition, and perceives the necessity of his division, which is a [mental] comprehension; and now only he has attained a *System*.

To search in common cognition for the concepts, which do not rest upon particular experience, and yet occur in all cognition of experience, in which they as it were constitute the mere form of connexion—to do this presupposes neither greater reflection nor deeper insight, than to detect in a language the rules of the actual use of words generally, and thus to collect elements for a grammar. In fact both researches are very nearly related, even though we are not able to give a reason why each language has just this and no other formal constitution, and still less why an exact number of such formal determinations in general are found in it.

Aristotle collected ten pure elementary concepts under the name of Categories.[1] To these, which are also called predicaments, he found himself obliged afterwards to add five post-predicaments,[2] some of which however (*prius*, *simul*, and *motus*), are contained in the former; but this random collection must rather be considered (and commended) as a hint for future inquirers, than as a regularly developed idea, and hence it has, in the present more advanced state of philosophy, been rejected as quite useless.

After long reflection on the pure elements of human knowledge (those which contain nothing empirical), I at last succeeded in distinguishing with certainty and in separating the pure elementary notions. of the Sensibility (space and time) from those of the Understanding. Thus the 7th, 8th, and 9th Categories are excluded from the old list. And the others were of no service to me; because there was [in Aristotle's mind] no principle, on which the understanding could be fully investigated, and all the functions, whence its pure concepts arise, determined completely and with precision.

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[1] 1. *Substantia.* 2. *Qualitas.* 3. *Quantitas.* 4. *Relatio.* 5. *Actio.* 6. *Passio.* 7. *Quando.* 8. *Ubi.* 9. *Situs.* 10. *Habitus.*

[2] *Oppositum. Prius. Simul. Motus. Habere.*

But in order to discover such a principle, I looked about for an act of the understanding which comprises all the rest, and is distinguished only by various modifications or moments, in reducing the multiplicity of representation to the unity of thinking in general: I found this act of the understanding to consist in judging. Here then the labours of the logicians were ready at hand, though not yet quite free from defects, and with this help I was enabled to exhibit a complete table of the pure functions of the understanding, which are however undetermined in regard to any object. I finally referred these functions of judging to objects in general, or rather to the condition of determining judgments as objectively valid, and so there arose the pure concepts of the understanding, concerning which I could make certain, that these, and this exact number only, constitute our whole cognition of things from pure understanding. I was justified in calling them by their old name, *Categories;* while I reserved for myself the liberty of adding, under the title of *Predicables*, a complete list of all the concepts deducible from them, by combinations whether among themselves, or with the pure form of the phenomenon (space or time), or with its matter, so far as it is not yet empirically determined (the object of sensation in general). This should be done as soon as a system of transcendental philosophy, towards which I am at present only contributing by the *Critick of the Reason* itself, comes to be constructed.

Now the essential point in this system of Categories, which distinguishes it from the old random collection without principle, and for which alone it deserves to be considered as philosophy, consists in this: that by means of it the true signification of the pure concepts of the understanding and the condition of their use could be precisely determined. For here it became obvious that they are themselves nothing but logical functions, and as such do not produce the least concept of an object, but require sensuous intuition as a basis. They therefore only serve to determine empirical judgments, which are otherwise undetermined and indifferent as regards all functions of judging, relatively to these functions, thereby procuring them universal validity, and by means of them making *judgments of experience* in general possible.

Such an insight into the nature of the categories, which limits them at the same time to the mere use of experience, never occurred either to their first author, or to any of his successors; but without this insight (which immediately depends upon their derivation or deduction), they are quite useless and only a miserable list of names, without explanation or rule for their use. Had the ancients ever conceived such a notion, doubtless the whole study of the pure rational knowledge, which under the name of Metaphysic has for centuries spoiled many a sound mind, would have reached us in quite another shape, and would have enlightened the human understanding, instead of actually exhausting it in obscure and vain subtilties, and rendering it unfit for true science.

Again: this system of categories makes all treatment of every object of pure reason itself systematic, and affords a direction or clue how and through what points of inquiry every metaphysical consideration must proceed, in order to be complete; for it exhausts all the momenta of the understanding, among which every concept must be classed. In like manner the table of Principles found its origin, the completeness of which we can only vouch for by the system of the categories; and even in the division of the concepts[1] which must go beyond the physiological use of the understanding it is the very same clue, which, as it must always be carried through the same fixed points determined *a priori* in the human understanding, always forms a closed circle; so that there is no doubt that the object of a pure understanding or of a rational-concept, so far as it is to be estimated philosophically and on *a priori* principles, can in this way be completely cognised. I could not therefore omit to make use of this clue with regard to one of the most abstract ontological divisions, the various distinctions of the *notions of something and of nothing*, and to construct accordingly (*Critick*, p. 207) a regular and necessary table of their divisions.[1]

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[1] *Critick*, pp. 207 and 257.

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[1] Many neat observations may be made on the table of the categories, for instance: (1.) that the third arises from the first and the second joined in one concept; (2.) that in those of Quantity and of Quality there is merely a progress from unity to totality or from something to nothing (for this purpose the categories of Quality must stand thus: reality, limitation, total negation), without *correlata* or *opposita*, whereas those of Relation and of Modality carry such with them; (3.) that, as in *Logic* categorical judgments are the basis of all others, so the category of Substance is the basis of all concepts of real things; (4.) that, as Modality in the judgment is not a particular predicate, so by the modal concepts a determination is not superadded to things, &c. &c. Such observations are of great use. If we besides enumerate all the *predicables*, which we can find pretty completely in any good ontology (for example, Baumgarten's),

And this system, like every other true one founded on a universal principle, shows its inestimable value in this, that it excludes all foreign concepts, which might otherwise intrude among the pure concepts of the understanding, and determines the place of every cognition. Those concepts, which under the name of *concepts of reflection* have been likewise arranged in a table, according to the clue of the categories, intrude themselves, without leave or right, among the pure concepts of the understanding in Ontology, though these are concepts of connexion, and thereby of the objects themselves, whereas the former are only concepts of the mere comparison of concepts already given, and are hence of quite another nature and use; by my orderly division[1] they are saved from this confusion. But the value of my separate table of the categories will be still more obvious, when we presently separate the table of the transcendental concepts of Reason, which are of quite another nature and

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and arrange them in classes under the categories, in which operation we must not neglect to add as complete a dissection of all these concepts as possible; there will then arise a merely analytical part of Metaphysic, which does not contain a single synthetical proposition, which might precede the second (the synthetical); and would by its precision and completeness be not only useful, but, in virtue of its system, be even to some extent elegant.

[1] *Critick*, p. 190, sqq.

origin, and hence must have quite *another* form from the concepts of the understanding. This so necessary separation has never yet been made in any system of Metaphysic [where on the contrary] these rational Ideas live with the categories without separation, like the children of one family—a confusion not to be avoided for want of a definite system of categories.

THIRD PART OF THE MAIN TRANSCENDENTAL PROBLEM.

How is Metaphysic in General Possible?

§ 40. Pure Mathematic and pure Science of Nature had no occasion for such a deduction, as we have made of both, *for their own safety* and certainty; for the former rests upon its own evidence; and the latter (though sprung from pure sources of the understanding) upon experience and its thorough confirmation, which latter testimony Physic cannot altogether refuse and dispense with; because with all its certainty, it can never, as philosophy, rival Mathematic. Both sciences therefore stood in need of this inquiry, not for themselves, but for the sake of another science, Metaphysic.

Metaphysic has to do not only with concepts of nature, which always find their application in experience, but with pure rational Concepts which never can be given in any possible experience, consequently with concepts whose objective reality (as different from mere chimeras), and with assertions whose truth or falsity, cannot be discovered or confirmed by any experience. This part of Metaphysic is precisely what constitutes its essential end, to which the rest is only a means, and thus this science requires a similar deduction *for its own sake.* The third question now proposed relates therefore as it were to the root and essential difference of Metaphysic, viz., the occupation of reason merely about itself, which, whilst meditating on its own concepts, relates to our acquaintance with objects, and [yet] is supposed to arise immediately from these concepts, without requiring, or indeed being at all able, to attain that acquaintance through the mediation of experience.[1]

Without resolving this question reason never does itself justice. The empirical use to which reason limits the pure understanding, does not satisfy its proper destination. Every single experience is only a part of the whole sphere of its domain, but *the absolute totality of all possible experience* is itself not experience. Yet it is a necessary problem for Reason, the mere representation of which requires concepts quite different from the Categories, whose use is only *immanent*, or refers to experience, so far as it can be given. Whereas the concepts of Reason extend to the completeness, that is, the collective unity of all possible experience, and thereby exceed every given experience, and become *transcendent*.

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[1] If we can say, that a science is *real*, at least in the idea of all men, as soon as it appears that the problems which lead to it are proposed to everybody by the nature of human reason, and that hence many (though faulty) essays in it are always unavoidable; then we are bound to say, that Metaphysic is subjectively (and indeed necessarily) real, and therefore we justly ask, how is it (objectively) possible.

As the understanding stands in need of categories for experience, Reason contains in itself the source of Ideas, by which I mean necessary notions, whose object *cannot* be given in any experience. The latter are inherent in the nature of Reason, as the former are in that of the understanding; and if the categories carry with them an illusion likely to mislead, in the Ideas it is inevitable, though it certainly can be kept from misleading us.

As all illusion consists in holding the subjective ground of our judgments to be objective, a self-knowledge of pure reason in its transcendent (exaggerated) use is the sole preservative from the aberrations into which reason falls when it mistakes its destination, and refers that to the object transcendently, which only regards its own subject and its guidance in all immanent use.

§ 41. The distinction of Ideas, that is, of pure concepts of Reason, from Categories, or pure concepts of the understanding, as cognitions of a quite distinct species, origin and use, is so important a point in founding a science which is to contain the system of all these *a priori* cognitions, that without this distinction metaphysic is absolutely impossible, or is at best a random, bungling attempt to build a castle in the air without a knowledge of the materials or of their fitness for any purpose. Had the *Critick of Pure Reason* done nothing but first point out this distinction, it had thereby contributed more to clear up our notions and to guide our inquiry in the field of metaphysic, than all the vain efforts which have hitherto been made to satisfy the transcendent problems of pure reason, without ever surmising that we were in quite another field than that of the understanding, and hence classing concepts of the understanding and those of Reason together, as if they were of the same kind.

§ 42. All pure cognitions of the understanding have this feature, that their concepts present themselves in experience and their principles can be confirmed by it; whereas the transcendent cognitions of Reason cannot, either as *Ideas*, appear in experience, or as *propositions* ever be confirmed or refuted by it. Hence whatever errors may slip in unawares, can only be discovered by pure Reason itself—a discovery of much difficulty, because this very Reason naturally becomes dialectical by means of its Ideas, and this unavoidable illusion cannot be limited by any objective and dogmatical researches into things, but by a subjective investigation of reason itself as a source of Ideas.

§ 43. In the *Critick of Pure Reason* it was always my greatest care to endeavour not only carefully to distinguish the [various] species of cognition, but to derive notions belonging to each one of them from their common source. I did this in order that by knowing whence they originated, I might determine their use with safety, and also have the very novel but incalculable advantage of knowing the completeness of my enumeration, classing, and specification of concepts *a priori*, and therefore according to principles. Without this [security] metaphysic is mere rhapsody, in which no one knows whether he has enough, or whether and where something is still wanting. We can indeed have this advantage only in pure philosophy, but of this philosophy it constitutes the very essence.

As I had found the origin of the categories in the four logical functions of all the judgments of the understanding, it was quite natural to seek the origin of the Ideas in the three functions of the syllogisms of Reason; for as soon as these pure concepts of Reason (the transcendental Ideas) are given, they could hardly, except they be held innate, be found anywhere else, than in the same act of Reason. This, so far as it regards mere form, constitutes the logical element of the syllogisms of Reason; but, so far as it represents the judgments of the understanding as determined relatively to the one or to the other form *a priori*, constitutes transcendental concepts of pure Reason.

The formal distinction of syllogisms renders their division into categorical, hypothetical, and disjunctive necessary. The concepts of Reason founded on them contain therefore, first, the Idea of the complete subject (the substantial); secondly, the Idea of the complete series of conditions; thirdly, the determination of all concepts in the Idea of a complete complex of [all] possible [being].[1] The first Idea is psychological, the second cosmological, the third theological, and, as all three give occasion to Dialectic, yet each in its own way, the division of the whole Dialectic of pure reason into its Paralogism, its Antinomy, and its Ideal, was arranged accordingly. Through this deduction we may feel assured that all the claims of pure reason are completely represented, and that none can be wanting; because the faculty of Reason itself, whence they all take their origin, is thereby completely surveyed.

§ 44. In these general considerations it is also remarkable that the Idea of Reason is not, like the categories, of any service to the use of our understanding in experience, but with respect to that use is quite dispensable, and even an impediment to the maxims of the rational cognition of nature, though necessary in another aspect still to be determined. Whether the soul is or is not a simple substance, is of no consequence to us in the explanation of its phenomena. For we cannot render the notion of a simple being intelligible by any possible experience sensuously or *in concreto*. The notion is therefore quite void as regards all hoped-for insight into the cause of phenomena, and cannot at all serve as a principle of the explanation of that which internal or external experience supplies. So the cosmological Ideas of the beginning of the world or of its eternity (*a parte ante*) cannot be of any greater service to us for the explanation of any event in the world itself. And finally we must, according to a right maxim of the philosophy of nature, refrain from all explanations of the design of nature, drawn from the will of a Supreme Being; because this [mode of explanation] is not natural philosophy, but an acknowledgment that we have reached its limits. The use of these Ideas, therefore, is quite distinct from that of those categories by which (and by the principles built upon which) experience itself first becomes possible. But our laborious Analytic of the understanding would be superfluous if we had nothing else in view than the mere cognition of nature as it can be given in experience; for reason does its work, both in mathematic and in the science of nature, quite safely and well without any of this subtile deduction; our Critick of the Understanding therefore combines with the Ideas of pure Reason for a purpose placed beyond the empirical use of the understanding, which we have already declared to be in this aspect totally impossible, and without any object or meaning. But yet there must be harmony between that which belongs to the nature of Reason and to that of the understanding, and the former must contribute to the perfection of the latter, and cannot possibly confuse it.

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[1] In disjunctive judgments we consider all *possibility* as divided in relation to a particular concept. The ontological principle of the thorough determination of a thing in general (viz., one of all possible opposite predicates belongs to everything) which is at the same time the principle of all disjunctive judgments, presupposes the complex of all possibility, in which the possibility of everything in general is considered as determined [reading *bestimmt*]. This may serve as a slight explanation of the above proposition: that the act of Reason in disjunctive syllogisms is formally the same as that, by which it accomplishes the Idea of a complex of all reality, which contains in itself the positive [member] of all [pairs of] contradictory predicates.

The solution of this question is as follows: Pure reason does not in its Ideas point to particular objects, which lie beyond the field of experience, but only requires completeness of the use of the understanding in the system of experience. But this completeness can be a completeness of principles only, not of intuitions and of objects. In order however to represent the Ideas to itself determinately, Reason conceives them as the cognition of an object which [cognition] is as regards these rules completely determined (though the object is only an Idea), for the purpose of bringing the cognition of the understanding as near as possible to the completeness, which that Idea denotes.

Prefatory Remark to the Dialectic of Pure Reason.

§ 45. We have above shown (in §§ 33 and 34), that the purity of the categories from all admixture of sensuous determinations may mislead reason into extending their use, quite beyond all experience, to things *per se*; though as these categories themselves find no intuition which can give them meaning or sense *in concreto* they (as mere logical functions) can represent a thing in general, but not give by themselves alone a determinate concept of any thing. Such hyperbolical objects are distinguished by the appellation of *Noümena*, or pure beings of the understanding (or better beings of thought), such as, for example, *substance*, but conceived without *permanence* in time, or *cause*, but not *acting in time*, &c. Here predicates, that only serve to make the legitimacy of experience possible, are applied to these concepts, and yet they are deprived of all the conditions of intuition, on which alone experience is possible, and so these concepts lose all signification.

There is no danger of the understanding spontaneously making an excursion so very wantonly beyond its own bounds into the field of the mere creatures of thought, without being impelled by foreign laws. But when Reason, which cannot be fully satisfied with any empirical use of the rules of the understanding, as being always conditioned, requires a completion of this chain of conditions, then the understanding is forced out of its sphere. And then it partly represents objects of experience in a series so extended as no experience can grasp, partly even (with a view to complete the series) it seeks entirely beyond it *noumena*, to which it can attach that chain, and so, having at last escaped from the conditions of experience, make its attitude as it were final. These are then the transcendental Ideas, which, though according to the true but hidden ends of the natural determination of our reason, they may aim not at extravagant concepts, but at illimited extension of empirical use, yet seduce [ablocken] the understanding by an unavoidable illusion to a *transcendent* use, which, though deceitful, cannot be restrained within the bounds of experience by any resolution, but only by scientific instruction and with much difficulty.

I. *The Psychological Idea.*[1]

§ 46. It has been long since observed, that in all substances the proper subject, that which remains after all the accidents (as predicates) are abstracted, consequently that which is itself *substantial*, is unknown, and various complaints have been made concerning these limits to our knowledge. But we must take care to observe, that the human understanding is not to be blamed for its inability to know the substance of things, that is, to determine it by itself, but rather for requiring to cognise a mere Idea determinately, like a given object. Pure reason requires us to seek for every predicate of a thing its proper subject, and for this subject, which is itself necessarily nothing but a predicate, *its* subject, and so on indefinitely (or as far as we can reach). But hence it follows, that we must not hold anything, at which we can arrive, to be an ultimate subject, and that substance itself never can be thought by our understanding, how ever deep we may penetrate, even if all nature were unveiled to us. For the specific nature of our understanding consists in thinking every thing discursively, that is, representing it by concepts, and so by mere predicates, to which therefore the absolute subject must always be wanting. Hence all the real properties, by which we cognise bodies, are mere accidents, not excepting impenetrability, which we can only represent to ourselves as the effect of a power of which the subject is unknown to us.

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[1] *Vide Critick*, p. 237, *sqq.*, and Appendix C to this volume. M.

Now we appear to have this substance in the consciousness of ourselves (in the thinking subject), and indeed in an immediate intuition; for all the predicates of an internal sense refer to the *ego*, as subject, and I cannot conceive myself as the predicate of any other subject. Hence completeness in the reference of the given concepts as predicates to a subject—not merely an Idea, but an object—that is, the *absolute subject* itself, seems to be given in experience. But this expectation is disappointed. For the *Ego* is not a concept,[1] but only the indication of the object of the internal sense, so far as we cognise it by no farther predicate. Consequently it cannot be in itself a predicate of any other thing; but just as little can it be a determinate concept of an absolute subject, but is, as in all other cases, only the reference of the internal phenomena to their unknown subject. Yet this Idea (which serves very well, as a regulative principle, totally to destroy all materialistic explanations of the internal phenomena of the soul) occasions by a very natural misunderstanding a very specious argument, which, from this supposed cognition of the substance of our thinking being, infers its nature, so far as the knowledge of it falls quite without the complex of experience.

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[1] Were the representation of the apperception (the *Ego*) a concept, by which any thing could be thought, it could be used as a predicate of other things or contain predicates in itself. But it is nothing more than the feeling of an existence without the least definite notion [Begriff] and is only the representation of that, to which all thinking stands in relation (*relatione accidentis*.)

§ 47. But though this thinking self (the soul) should be termed substance, as being the ultimate subject of thinking which cannot be farther represented as the predicate of another thing; yet this concept remains quite empty and without results, if permanence—the quality which renders the concept of substances in experience fruitful—cannot be deduced from it.

But permanence can never be proved from the concept of a substance, as a thing *per se*, but for the purposes of experience only. This is sufficiently shown by the first Analogy of Experience,[1] and whoever will not yield to this proof may try for himself whether he can succeed in proving, from the concept of a subject which does not exist itself as the predicate of another thing, that its existence is thoroughly permanent, and that it cannot either in itself or by any natural cause originate or be annihilated. These synthetical *a priori* propositions can never be proved in themselves, but only in reference to things as objects of possible experience.

§ 48. If therefore from the concept of the soul as a substance, we would infer its permanence, this can hold good as regards possible experience only, not [of the soul] as a thing in itself and beyond all possible experience. But life is the subjective condition of all our possible experience, consequently we can only infer the permanence of the soul in life; for the death of man is the end of all experience which concerns the soul as an object of experience, except the contrary be proved, which is the very question in hand. The permanence of the soul can therefore only be proved where everybody grants it, during the life of man. But we cannot [establish it], as we desire to do, after death; and for this general reason, that the concept of substance, so far as it is to be considered necessarily combined with the concept of permanence, can be so combined only according to principles of possible experience, and therefore for the purposes of experience only.[1]

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[1] Cf. *Critick*, p. 136, *sqq*.

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[1] It is indeed very remarkable, how carelessly metaphysicians have always passed over the principle of the permanence of substances without ever attempting a proof of it; doubtless because they found themselves abandoned by all proofs as soon as they began to deal with the concept of substance. Common sense, which felt distinctly that without this presupposition no union of perceptions in experience is possible, supplied the want by a postulate; for from experience itself it never could derive such a principle, partly because substances cannot be so traced in all their alterations and dissolutions, that the matter can always be found undiminished, partly because the principle contains *necessity*, which is always the sign of an *a priori* principle. People then boldly applied this postulate to the concept of soul as a *substance*, and concluded a necessary continuance of the soul after the death of man (especially as the simplicity of this substance, which is inferred from the indivisibility of con-

§ 49. *That something real without us not only* corresponds, but must correspond, to our external perceptions, can likewise be proved not as a connexion of things in themselves, but for the purpose of experience. This means:—that it certainly admits of proof that there is something empirical, i. e. [existing] as ~~a~~ phenomena in space without us; for we have nothing to do with other objects, than those which belong to possible experience; because objects, which cannot be given us in any experience, are nothing to us. That which is immediately represented in space, is empirically without [outside] me, and space together with all the phenomena, which it contains, belongs to the representations, whose connexion according to laws of experience proves their objective truth, just as the connexion of the phenomena of the internal sense proves the reality of my soul (as an object of the internal sense). I am therefore conscious by means of external experience of the reality of bodies, as external

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sciousness, secured it from destruction by dissolution). Had they found the genuine source of this principle—a discovery which requires deeper researches than they were ever inclined to make—they would have seen, that the law of the permanence of substances has place for the purposes of experience only, and hence can hold good of things, so far as they are to be cognised and conjoined with others in experience, but never independently of all possible experience, and consequently cannot hold good of the soul after death.

phenomena in space, in the same manner as I am, by means of the internal experience, of the existence of my soul in time.[1] For this (soul) I only cognise as an object of the internal sense by phenomena that constitute an internal state, and of which the being *per se*, which forms the basis of these phenomena, is unknown to me. Cartesian idealism therefore does nothing but distinguish external experience from dreaming; and the regularity (as a criterion of the truth) of the former, from the irregularity and the false illusion of the latter. In both it presupposes space and time as conditions of the existence of objects, and it only inquires whether the objects of the external senses, which we when awake put in space, are as really to be found in it, as the object of the internal sense, the soul, is in time; that is, whether experience carries with it sure criteria to distinguish it from imagination. Now this doubt may easily be removed, and we always do remove it in common life by investigating the connexion of phenomena in both [space and time] according to universal laws of experience, and we cannot doubt, when the representation of external things thoroughly agrees therewith, that they constitute real experience. Material idealism, in which phenomena are considered as such only according to their connexion in experience, may accordingly be very easily refuted, and it is just as sure an experience, that bodies exist without us (in space), as that I myself exist according to the representation of the internal sense (in time): for the notion *without* [outside] us, only signifies existence in space. But as the *Ego* in the proposition, *I am*, means not only the object of internal intuition (in time), but the subject of consciousness, just as body means not only external intuition (in space), but the thing *in itself*, which is the basis of this phenomenon; [as this is the case] the question, whether bodies (as phenomena of the external sense) exist as bodies *apart from my thoughts*, may without any hesitation be denied in nature. But the question, whether I myself *as a phenomenon of the internal sense* (the soul according to empirical psychology) exist apart from my faculty of representation in time, is an exactly similar inquiry, and must likewise be answered in the negative. And in this manner every thing, when it is reduced to its true meaning, is decided and certain. The formal (which I have also called transcendental), actually abolishes the material, or Cartesian, idealism. For if space be nothing but a form of my sensibility, it is as a representation in me just as real as I myself am, and nothing but the empirical truth of the representations in it remains for consideration. But, if this is not the case, if space and the phenomena in it are something existing out of us, then all the criteria of experience beyond our perception can never prove the reality of these objects without us.[1]

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[1] It is to be observed that Kant here places his refutation of Cartesian idealism in the place which it held in the First Edition of the *Critick*. In the Second Edition it was transferred to an earlier, and I think a better, place, in connexion with the Postulates of Empirical Thinking. M.

II. *The Cosmological Idea.*[2]

§ 50. This product of pure Reason in its transcendent use is its most remarkable phenomenon, and the most powerful of all means of rousing philosophy from its dogmatic slumber, and of exciting it to undertake the arduous task of the *Critick of the Reason* itself.

I term this Idea cosmological, because it only takes its objects from the sensible world, and does not use any other than those whose object is given to sense, consequently is so far at home [immanent], not transcendent, and therefore so far not an Idea; whereas, to conceive the soul as a simple substance, already means to conceive such an object (Simplicity) as cannot be represented to the senses. Yet the cosmological Idea extends the connexion of the conditioned with its condition (whether the connexion is mathematical or dynamical) so far, that experience never can keep up with it. It is therefore with regard to this point always an Idea, whose object never can be adequately given in any experience.

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[1] The foregoing paragraph is an excellent commentary on the Refutation of (Cartesian, not Berkleian) idealism in the Second Edition of the *Critick*, and corroborates my assertion that it has been absurdly misconceived. It is not creditable to German Kantians that they have propagated this blunder. M.

[2] Cf. *Critick*, p. 256.

§ 51. In the first place, the use of a system of categories becomes here so obvious and unmistakeable, that even if there were not several other proofs of it, this alone would sufficiently prove it indispensable in the system of pure reason. There are only four such transcendent Ideas, as there are so many classes of categories; in each of which, however, they refer only to the absolute completeness of the series of the conditions for a given conditioned. And conformably to these cosmological Ideas there are only four kinds of dialectical assertions of pure Reason, which as they are dialectical, thereby prove, that to each of them, on equally specious principles of pure reason, a contradictory assertion stands opposed. As all the metaphysical art of the most subtile distinction cannot prevent this opposition, it compels the philosopher to recur to the first sources of pure reason itself. This Antinomy, not arbitrarily invented, but founded in the nature of human reason, and hence unavoidable and never ceasing, contains the following four theses together with their antitheses:

1.

Thesis.

The World has, as to Time and Space, a Beginning (Bounds).

Antithesis.

The World is, as to Time and Space, infinite.

2.

Thesis.

Every thing in the World consists of *simple* [parts].

Antithesis.

There is nothing simple, but every thing is *composite.*

3.

Thesis.

There are in the World Causes [acting] through *Freedom* [Liberty].

Antithesis.

There is no Liberty, but all is *Nature.*

4.

Thesis.

In the Series of the World-Causes there is some *necessary Being.*

Antithesis.

There is Nothing necessary in the World, but in this Series *All is contingent.*

§ 52. *a.* Here we have the most singular phenomenon of human reason, no other instance of which can be shown in any other use [of reason]. If we, as is commonly done, represent to ourselves the phenomena of the sensible world as things in themselves, if we assume the principles of their combination as principles universally valid of things in themselves and not merely of experience (as is usually, nay without our Critick, unavoidably done); there arises an unexpected conflict, which never can be removed in the common dogmatical way; because the thesis, as well as the antithesis, can be shown by equally clear, evident, and irresistible proofs—for I pledge myself as to the correctness of all these proofs—and reason therefore perceives that it is divided with itself, a state at which the sceptic rejoices, but which must cause the critical philosopher reflection and uneasiness.

§ 52. *b.* We may make divers blunders in Metaphysic without any fear of being detected in falsehood. For we never can be refuted by experience if we but avoid self-contradiction, which in synthetical, though purely invented propositions, may be done whenever the concepts, which we connect, are mere Ideas, that cannot be given (as to any part of their matter) in experience. For how can we make out by experience, whether the world is from eternity or had a beginning, whether matter is infinitely divisible or consists of simple parts? Such concepts cannot be given in any experience, however great, and consequently the falsehood either of the positive or the negative proposition cannot be discovered by this test.

The only possible case, in which Reason reveals unintentionally its secret Dialectic, which it falsely announces as Dogmatic, is when it grounds an assertion upon an universally admitted principle, and from another equally admitted infers, with the greatest accuracy of inference, the exact contrary. This is actually here the case with regard to four natural Ideas of Reason, whence four assertions on the one side, and as many counter-assertions on the other arise, each strictly following from universally-acknowledged principles. Thus the dialectical illusion of pure Reason appears in the use of these principles, [an illusion] which must otherwise be for ever concealed.

This is therefore a decisive experiment, which must necessarily expose any error lying hidden in the assumptions of Reason.[1] Contradictory propositions cannot both be false, except the concept, which is the subject of both, is self-contradictory; for example, the propositions, 'a square circle is round, and a square circle is not round,' are both false. For, as to the former it is false, that the circle is round, because it is quadrangular; and it is likewise false, that it is not round, that is, angular, because it is a circle. For the logical mark of the impossibility of a concept consists in this, that if we presuppose it, two contradictory propositions both become false; consequently, as no middle between them is conceivable, *nothing at all* is thought by that concept.

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[1] I therefore request the critical reader to make this Antinomy his chief study, because nature itself seems to have established it with a view to stagger reason in its daring pretensions, and to force it to self-examination. For every proof, which I have given, as well of the thesis as of the antithesis, I undertake to be responsible, and thereby to show the certainty of the inevitable Antinomy of reason. As soon as the reader is brought by this curious phenomenon to recur to the proof of the

§ 52. *c*. The first two Antinomies, which I call mathematical, because they are concerned with the addition or division of the homogeneous, are founded on such a self-contradictory concept; and hence I explain how it happens, that the Thesis in both, as well as the Antithesis [addition and subdivision] is false.

When I speak of objects in time and in space, it is not of things in themselves, of which I know nothing, but of things as phenomena, that is, of experience, as the particular way of cognising objects, which is vouchsafed to man. Accordingly

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presumption upon which it rests, he will feel himself constrained to investigate the first foundation of all the cognition of pure reason with me more thoroughly.

I must not say of what I think in time or in space, that in itself, and beyond [outside] these my thoughts, it exists in space and in time; for in that case I should contradict myself; because space and time, together with the phenomena in them, are nothing existing in themselves and without [outside] my representations, but are themselves only modes [species] of representation, and it is palpably contradictory to say, that a mere mode of representation exists without our representation. Objects of the senses therefore exist only in experience; whereas to give them a self-subsisting existence apart from experience or before it, is merely to represent to ourselves, that experience actually exists apart from experience or before it.

Now if I inquire after the quantity of the world, as to space and time, it is equally impossible, as regards all my notions, to declare it infinite, or to declare it finite. For neither assertion can be contained in experience, because experience either of an *infinite* space, or of an infinite time elapsed, or again, of the *limitation* of the world by a void space or an antecedent void time, is impossible; these are only Ideas. This quantity of the world, which is determined in either way, should therefore exist in the world *per se* apart from all experience. But this contradicts the notion of a world of sense, which is merely a complex of the phenomena whose existence and connexion occur only in our representations, that is, in experience, since this latter is not a thing *per se*, but is itself a mere mode of representation. Hence it follows, that as the concept of an absolutely existing world of sense is self-contradictory, the solution of the problem concerning its quantity, whether attempted affirmatively or negatively, is always false.

The same holds good of the second Antinomy, which relates to the division of phenomena. For these are mere representations, and the parts exist merely in their representation, consequently in the division, or in a possible experience where they are given, and the division reaches only as far as this latter reaches. To assume that a phenomenon, *e. g.*, that of body, contains in itself before all experience all the parts, which any possible experience can ever reach, is to give a mere phenomenon, which can exist only in experience, withal an existence previous to experience; or to say, that mere representations exist before they occur in our faculty of representation, which assertion is self-contradictory, as also every solution of our misunderstood problem, whether we maintain, that bodies in themselves consist of an infinite number of parts, or of a finite number of simple parts.

§ 53. In the first (the mathematical) class of Antinomies the falsehood of the assumption consists in representing that what is self-contradictory (a phenomenon as a thing *per se*) can be united in one concept. But, as to the second (the dynamical) class of Antinomies, the falsehood of the representation consists in representing as contradictory what can be united; so that, as in the former case, the opposed assertions are both false, in this case, on the other hand, where they are opposed to one another by mere misunderstanding, they may both be true.

For mathematical connexion necessarily presupposes homogeneity of what is connected (in the concept of quantity), but this is by no means requisite in the dynamical. When the quantum of what is extended is in question, all the parts must be homogeneous with one another and with the whole; whereas, in the connexion of cause and effect, homogeneity may indeed likewise be found, but is not necessary; for the concept of causality (by means of which something is posited through something else quite distinct from it) at all events, does not require it.

If the objects of the sensuous world are taken for things in themselves, and the above laws of nature for the laws of things in themselves, the contradiction would be unavoidable. So also, if the subject of freedom is, like other objects, represented as mere phenomenon, the contradiction is just as unavoidable, for the same predicate is at once affirmed and denied of the same kind of object in the same sense. But if natural necessity is referred merely to phenomena, and freedom merely to things in themselves, no contradiction arises, if we at once assume, or admit both kinds of causality, however difficult or impossible it may be to make the latter kind conceivable.

In the phenomenon every effect is an event, or something that happens in time; it must, according to the universal law of nature, be preceded by a determination of the causality (or state) of its cause, which follows according to a constant law. But this determination of the cause to [produce] causality must likewise be something that happens, or *takes place;* the cause must have *begun to act*, otherwise no succession between it and the effect could be conceived. Otherwise the effect, as well as the causality of the cause, would have always existed. Therefore *the determination* of the cause to act must also have originated among phenomena, and must consequently, as well as its effect, be an event, which must again have its cause, and so on; hence natural necessity must be the condition, on which efficient causes are determined. Whereas if freedom is to be a property of certain causes of phenomena, it must, as regards these, which are events, be a faculty of beginning them *from itself* (*sponte*), that is, without the causality of the cause itself beginning, and hence without requiring any other ground to determine its beginning. But then the *cause*, as to its causality, must not rank under time-determinations of its state, that is, *not be a phenomenon*, and must be considered a thing *per se*, and its *effects* only, as phenomena.[1] If we can think such an influence of the beings of pure thought (*Verstandeswesen*) on phenomena without contradiction, then natural necessity will attach to all connexion of cause and effect in the sensuous world, but, on the other hand, liberty can be granted to such cause, as is itself not a phenomenon (though the basis of one). Nature therefore and freedom can without contradiction be attributed to the very same thing, but in different relations, on one side as a phenomenon, on the other as a thing *per se.*

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[1] The Idea of freedom occurs only in the relation of the *intellectual*, as cause, to the *phenomenon*, as effect. Hence we cannot attribute freedom to matter in regard to the incessant action by which it fills its space, though this action takes place from an internal principle. We can likewise find no notion of freedom suitable to pure rational beings, for instance, to God, so far as his action is immanent. For his action, though independent upon external determining causes, is determined in his eternal reason, that is, in the divine *nature*. It is only, if *something is to begin* by an action, and so the effect occurs in the sequence of time, or in the world of sense (*e. g.* the beginning of the world), that we can put the question, whether the causality of the cause must likewise itself begin, or whether the cause can originate an effect without its causality itself beginning. In the former case the concept of this causality is a concept of natural necessity, in the latter, that of freedom. From this the reader will see, that, as I explained freedom to be the faculty of beginning an event spontaneously, I have exactly hit the notion, which is the problem of Metaphysic.

We have in us a faculty, which not only stands in connexion with its subjective determining grounds, that are the natural causes of its actions, and is so far the faculty of a being that itself belongs to phenomena: but is [also a faculty] referred to objective grounds, that are only Ideas, so far as they can determine this faculty, a connexion which is expressed by the word *ought.* This faculty is called *Reason*, and, so far as we consider a being (man) entirely according to this objectively determinable reason, he cannot be considered as a being of sense, but this property is that of a thing *per se*, of which we cannot comprehend the possibility—I mean how the *ought* (which however has never yet taken place) should determine its activity, and can become the cause of actions, whose effect is a phenomenon in the sensible world. Yet the causality of Reason would be freedom with regard to the effects in the sensuous world, so far as we can consider *objective grounds*, which are themselves Ideas, as determining in regard to it. For its action in that case would not depend upon subjective conditions, consequently not upon those of time, and of course not upon the law of nature, which serves to determine them, because grounds of reason give to actions the rule universally, according to principles, without the influence of the circumstances of either time or place.

What I adduce here is merely meant as an example to make the thing intelligible, and does not necessarily belong to our problem, which must be decided from mere concepts, independently of the properties which we meet in the real world.

Now I may say without contradiction: that all the actions of rational beings, so far as they are phenomena (occurring in any experience), are subject to the necessity of nature; but the same actions, as regards merely the rational subject and its faculty of acting according to mere Reason, are free. For what is required for the necessity of nature? Nothing farther than the determinability of every event in the world of sense according to constant laws, that is a reference to cause in the phenomenon; in this process the thing in itself at its basis and its causality remain unknown. But I say, that *the law of nature remains*, whether the rational being is the cause of the effects in the sensuous world from reason, that is through freedom, or whether it does not determine them on grounds of reason. For, if the former is the case, the action is performed according to Maxims, the effect of which as phenomenon is always conformable to constant laws; if the latter is the case, and the action not performed on principles of Reason, it is subjected to the empirical laws of the sensibility, and in both cases the effects are connected according to constant laws; more than this we do not require or know concerning natural necessity. But in the former case reason is the cause of these laws of nature, and therefore free; in the latter the effects follow according to mere natural laws of sensibility, because reason does not influence it; but reason itself is not determined on that account by the sensibility, and is therefore free in this case too. Freedom is therefore no hindrance to natural law in phenomena, neither does this law interfere with the freedom of the practical use of Reason, which is connected with things in themselves, as determining grounds.

And thus we rescue practical freedom, or that in which Reason has causality according to objectively determining grounds, and do not curtail natural necessity in the least with regard to the very same effects, as phenomena. The same remarks may be serviceable for the illustration of what we had to say concerning transcendental freedom and its union with natural necessity (in the same subject, but not taken in the same reference). For, as to this, every beginning of the action of a being from objective causes regarded as determining grounds, is always a *first beginning*, though the same action is in the series of phenomena only a *subaltern beginning*, which must be preceded by a state of the cause, which determines it, and is itself determined in the same manner by another immediately preceding. Thus we are able, in rational beings, or in beings generally, so far as their causality is determined in them as things *per se*, to imagine a faculty of beginning from itself a series of states, without falling into contradiction with the laws of nature. For the relation of the action to objective grounds of reason is not a time-relation; in this case that which determines the causality does not precede in time the action, because such determining grounds represent not a reference to objects of sense, *e. g.* to causes in the phenomenon, but [they represent] determining causes, as things *per se*, which do not rank under conditions of time. And in this way the action, with regard to the causality of reason, can be considered as a first beginning in respect to the series of phenomena, and yet also as a merely subordinate beginning. We may therefore consider it (without contradiction) in the former aspect as free, but in the latter (as it is merely phenomenon) as subject to natural necessity.

As to the *fourth* Antinomy, it is solved in the same way as the conflict of reason with itself in the third. For, provided the *cause in the phenomenon* is distinguished from the *cause of the phenomena* (so far as it can be thought as *a thing per se*), both propositions are perfectly reconcileable, the one, that there is nowhere in the sensuous world a cause (according to similar laws of causality), whose existence is absolutely necessary; the other, that this world is nevertheless connected with a Necessary Being as its cause (but of another kind and according to another law). The incompatibility of these propositions entirely rests upon the mistake of extending what is valid merely of phenomena to things in themselves, and in general confusing both in one concept.

§ 54. This is the arrangement and this the solution of the whole Antinomy, in which reason finds itself involved in the application of its principles to the sensible world, the former of which alone (the mere arrangement) would be of considerable use in promoting the knowledge of human reason, even though the solution failed to fully satisfy the reader, who has here to combat a natural illusion, which has been but recently exposed to him, and which he had hitherto always regarded as true. For one result at least is unavoidable. As it is quite impossible to prevent this conflict of reason with itself—so long as the objects of the sensible world are taken for things in themselves, and not for mere phenomena, which they really are—the reader is thereby compelled to examine over again the deduction of all our *a priori* cognition and the proof which I have given of my deduction in order to come to a decision on the question. This is all I require at present; for when in this occupation he shall have thought himself far enough into the nature of pure reason, the only notions by which the solution of the conflict of reason is possible, will become sufficiently familiar to him. Without this preparation I cannot expect a hasty assent even from the most attentive reader.

III. *The Theological Idea.*[1]

§ 55. The third transcendental Idea, which affords matter for the most important, but, if pursued only speculatively, transcendent and thereby dialectical use of Reason, is the Ideal of pure Reason. Reason in this case does not, as with the psychological and the cosmological Ideas, begin from experience, and err by exaggerating its grounds, in striving to attain, if possible, the absolute completeness of their series. It rather breaks totally with experience, and from mere concepts of what constitutes the absolute completeness of a thing in general, consequently by means of the Idea of a most perfect primal Being, it proceeds to determine the possibility and therefore the reality of all other things. Hence the mere presupposition of a Being, who is conceived not in the series of experience, yet for the purposes of experience—for the sake of comprehending its connexion, order, and unity—that is, the *Idea*, is more easily distinguished from the concept of the understanding here, than in the former cases. Hence we can easily expose the dialectical illusion which arises from our making the subjective conditions of our thinking objective conditions of things themselves, and [so holding] a necessary hypothesis for the satisfaction of our reason to be a dogma. As the observations of the *Critick* on the pretensions of transcendental theology are intelligible, clear, and decisive, I have nothing more to add on the subject.

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[1] Cf. *Critick*, p. 350, *sqq.*

General Remark on the Transcendental Ideas.

§ 56. The objects, which are given us by experience, are in many respects incomprehensible, and many questions, to which the law of nature leads us, when carried beyond a certain point (though quite conformably to the laws of nature), admit of no answer; as for example the question: why substances attract one another? But if we entirely quit nature, or in pursuing its combinations, exceed all possible experience, and so involve ourselves in mere Ideas, we cannot then say that the object is incomprehensible, and that the nature of things proposes to us insoluble problems. For we are not then concerned with nature or in general with given objects, but with concepts, which have their origin merely in our reason, and with mere creatures of thought. As regards these all the problems that arise from our notions of them must be solved, because of course reason can and must give a full account of its own procedure.[1] As the psychological, cosmological, and theological Ideas are nothing but pure concepts of Reason, which cannot be given in any experience, the questions which reason asks us about them are put to us not by the objects, but by mere maxims of our reason for the sake of its own satisfaction. They must collectively be capable of complete answers, which is done by showing that they are principles which bring our use of the understanding into thorough agreement, completeness, and synthetical unity, and that they so far hold good of experience only, but of experience as a *whole.* But though an absolute whole of experience is impossible, yet the Idea of a whole of cognition according to principles must above all things afford our knowledge a particular sort of unity, that of a system, without which it is nothing but patchwork, and cannot be used for the highest end (which can only be the system[-atising] of all ends)—I

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[1] And therefore Platner in his Aphorisms acutely says (§ 728-9), 'If reason be a criterion, no concept, which is incomprehensible

to human reason, can be possible. Incomprehensibility has place in what is real only. Here incomprehensibility arises from the insufficiency of the acquired ideas.' It therefore only sounds paradoxical, but is otherwise not strange to say, that in nature there is much incomprehensible (*e. g.* the faculty of generation), but if we mount still higher, and even go beyond nature, everything again becomes comprehensible; for we then quit entirely the objects, which can be given us, and occupy ourselves merely about Ideas, in which occupation we can easily comprehend the law that reason prescribes by them to the understanding for its use in experience, because the law is the reason's own production.

do not here mean only the practical, but also the highest end of the speculative use of reason.

The transcendental Ideas therefore express the peculiar intuition of reason as a principle of systematic unity in the use of the understanding. Yet [we are apt to consider] this unity of the mode of cognition as attached to the object of cognition, if we regard that which is merely *regulative* to be *constitutive*, and if we persuade ourselves, that we can by means of these Ideas enlarge our cognition transcendently, or far beyond all possible experience. But [if we do] so—as this unity only serves to render experience within itself as nearly complete as possible, that is, to limit its progress by nothing that cannot belong to experience—it is a mere misunderstanding in our estimate of the proper destination of our reason and of its principles, a Dialectic, which both confuses the experience-use of reason, and also sets reason at variance with itself.

CONCLUSION.

On the Limitation of Pure Reason.

§ 57. After all the very cogent proofs already adduced, it were absurd for us to hope to know more of any object, than belongs to the possible experience of it, or to lay claim to the least atom of knowledge about anything not assumed to be an object of possible experience, which would determine it according to the constitution it has in itself. For how could we compass this determination, as time, space, and the Categories, and still more all the concepts formed by empirical intuition or *perception* in the sensible world, have and can have no other use, than to make experience possible. And if this condition is not imposed on the pure concepts of the understanding, they do not determine any object, and have no meaning whatever.

But it would be on the other hand a still greater absurdity if we conceded no things *per se*, or set up our experience for the only possible mode of knowing things, our intuition in space and in time for the only possible intuition, and our discursive understanding for the archetype of every possible understanding; in fact if we wished to have the principles of the possibility of experience considered universal conditions of things in themselves.

Our principles, which limit the use of reason merely to possible experience, might in this way become *transcendent*, and the limits of our reason be set up as limits of the possibility of things themselves (as Hume's dialogues may illustrate), if a careful critick did not guard the bounds of our reason with respect to its empirical use, and set a limit to its pretensions. Scepticism originally arose from metaphysic and its licentious dialectic. At first it might, merely to favour the experience-use of reason, announce everything that transcends this use as worthless and deceitful, but by-and-bye, when it was perceived, that the very same principles that are used in experience, insensibly, and apparently with the same right, led still farther than experience extends, then men began to doubt even the propositions of experience. But here there is no danger; for sound sense will doubtless always assert its rights. A certain confusion, however, arose in science which cannot determine how far reason is to be trusted, and why only so far and no farther, and this confusion can only be cleared up and all future relapses obviated by a formal determination, on principle, of the boundary of the use of our reason.

We cannot indeed, beyond all possible experience, form a determinate notion of what things in themselves may be. Yet we are not at liberty to abstain entirely from inquiring into them; for experience never satisfies reason fully, but in answering questions, refers us farther and farther back, and leaves us dissatisfied with regard to their complete solution. This any one may gather from the Dialectic of pure reason, which therefore has its good subjective grounds. If we can advance, as regards the nature of our soul, as far as a clear consciousness of the subject, and the conviction, that its phenomena cannot be *materialistically* explained, who can refrain from asking what the soul really is, and, if no concept of experience suffices for the purpose, from accounting for it by a concept of Reason (that of a simple immaterial being), though we cannot by any means prove its objective reality? Who can satisfy himself with mere experience-knowledge in all the cosmological questions of the duration and of the quantity of the world, of liberty or of natural necessity, as every answer given on principles of experience begets a fresh question, which likewise requires its answer, and thereby clearly shows the insufficiency of all physical modes of explanation to satisfy reason? Finally, who is there that does not see, in the thorough contingency and dependence of all his thoughts and assumptions on mere principles of experience, the impossibility of stopping there? And who does not feel himself compelled, notwithstanding all interdictions against losing himself in transcendent Ideas, to seek tranquillity and contentment beyond all the concepts which he can vindicate by experience, in the concept of a single Being? The possibility indeed of this Idea in itself, we cannot conceive, but at the same time we cannot refute it, because it relates to a mere being of the understanding, and without it reason must needs remain for ever dissatisfied.

Bounds (in extended beings) always presuppose a space existing outside a certain determinate place, and inclosing it; limits do not require this, but are mere negations, which affect a quantity, so far as it is not absolutely complete. But our reason, as it were, sees a space around it for the cognition of things in themselves, though it (reason) never can have determinate notions of them, and is limited to phenomena only.

As long as the cognition of reason is homogeneous, determinate bounds to it are inconceivable. In mathematic and in natural philosophy human reason admits of limits, but not of bounds, viz., that something indeed lies without it, at which it can never arrive, but not that it will at any point find completion in its internal progress. The enlarging of our views in mathematic, and the possibility of new discoveries, are infinite ; and the same is the case with the discovery of new properties of nature, of new powers and laws, by continued experience and its rational combination. But limits cannot be mistaken here, for mathematic refers to *phenomena* only, and what cannot be an object of sensuous intuition, such as the concepts of metaphysic and of morals, lie entirely without its sphere, and it can never lead to them ; neither does it require them. It is therefore not a continual progress and an approximation towards these sciences, and there is not, as it were, any point or line of contact. Natural philosophy will never discover to us the internal constitution of things, which is not phenomenon, yet can serve as the ultimate ground of explanation of phenomena; but that science does require this for its physical explanations. Nay even if such grounds should be offered from other sources (for instance, the influence of immaterial beings), they must be rejected and not used in the progress of its explanations. For these explanations must only be grounded upon that which as an object of sense can belong to experience, and be brought into connexion with our real perceptions according to the laws of experience.

But Metaphysic leads us towards bounds in the dialectical attempts of pure reason (not undertaken arbitrarily or wantonly, but excited by the nature of reason itself). And the transcendental Ideas, as they do not admit our intercourse, and are never capable of realisation, serve to point out to us actually not only the bounds of the pure use of reason, but also the way to determine them. Such is the end and the use of this natural predisposition of our reason, which has brought forth Metaphysic as its pet, whose generation, like every other in the world, is not to be ascribed to blind chance, but to an original germ, wisely organised for great ends. For Metaphysic, in its fundamental features, perhaps more than any other science, is placed in us by nature itself, and cannot be considered the production of a voluntary choice or a casual enlargement in the progress of experience, from which it is quite distinct.

Reason finds of itself no satisfaction by all its concepts and laws of the understanding, which suffice for empirical use, or within the sensible world; as ever-recurring questions deprive us of all hope of their complete solution. The transcendental Ideas, which have that completion in view, are such problems of Reason. But it sees clearly, that the sensuous world cannot contain this completion, neither consequently can all the concepts, which serve merely for understanding the world of sense, such as space and time, and whatever we have adduced under the name of pure concepts of the understanding. The sensuous world is nothing but a chain of appearances connected according to universal laws, it has therefore no subsistence by itself; it is not the thing in itself, and consequently must point to that which contains the basis of this experience, to beings which cannot be cognised merely as phenomena, but as things *per se.* In the cognition of them alone reason can hope to satisfy its desire of completeness in proceeding from the conditioned to its conditions.

We have indicated (§§ 34, 35) the limits of reason with regard to all cognition of mere beings of thought. Now only—since the transcendental Ideas compel us to approach them, and so have led us, as it were, only to the contact of the full space (of experience) with the void (of which we can know nothing, *noumena*)—now only we can determine the bounds of pure reason. For in all bounds there is something positive (*e. g.*, a surface is the boundary of corporeal space, and is therefore itself a space, a line is a space, which is the boundary of the surface, a point the boundary of the line, but yet always a place in space), whereas limits contain mere negations. The limits pointed out in those paragraphs are not enough after we have discovered that beyond them there still lies something (though we can never cognise what it is in itself). For the question now is, what is the attitude of our reason in this connexion of what we know with what we do not, and never shall, know? This is a real connexion of a known thing with one quite unknown (and which will always remain so), and though what is unknown should not become the least more known—which we cannot even hope—yet the notion of this connexion must be definite, and capable of being rendered distinct.

We must therefore conceive an immaterial being, an intelligible world, and a Supreme Being (mere *noumena*), because in them only, as things in themselves, Reason finds that completion and satisfaction, which it never can hope for in the derivation of phenomena from their homogeneous grounds, and because these actually refer to something distinct from them (and totally heterogeneous), as phenomena always presuppose a thing *per se*, and therefore indicate it, whether we can know more of it or not.

But as we can never cognise these beings of understanding as they are *per se*, that is, determinately, yet must assume them as regards the sensible world, and connect them with it by reason, we are at least able to think this connexion by means of such concepts as express their relation to the world of sense. Yet if we represent to ourselves a being of the understanding by nothing but pure concepts of the understanding, we then indeed represent nothing determinate to ourselves, consequently our concept has no signification; but if we think it by properties borrowed from the sensuous world, it is no longer a being of understanding, but is conceived as a phenomenon, and belongs to the sensible world. Let us take an instance from the notion of the Supreme Being.

Our notion of the *Deity* [deistischer Begriff] is quite a pure concept of Reason, but represents only a thing containing all realities, without being able to determine any one of them; because for that purpose an example must be taken from the sensuous world, in which case we should have an object of sense only, not something quite heterogeneous, which cannot be such. For suppose I attribute to the Supreme Being understanding, for instance; I have no concept of an understanding other than mine, one that must receive intuitions by the senses, and which is occupied in bringing them under rules of the unity of consciousness. But then the elements of my notion would always lie in appearances; I should however by the insufficiency of the phenomena be necessitated to go beyond them to the concept of a being which neither depends upon phenomena, nor is bound up with them as conditions of its determination. But if I separate understanding from sensibility to obtain a pure understanding, then nothing remains but the mere form of thinking without intuition, by which form alone I can cognise nothing determinate, and consequently no object. For that purpose I must conceive another understanding, which should intuite objects, but of which I have not the least notion; because the human understanding is discursive, and can only cognise by means of general concepts. And the very same difficulties arise if we attribute a will to the Supreme Being; for we have this concept only by drawing it from our internal experience, and therefore from our dependence for satisfaction upon objects whose existence we require; and so the notion rests upon sensibility, which is totally repugnant to the pure concept of the Supreme Being.

Hume's objections to deism are weak, and affect only the proofs, and not the deistical assertion itself. But as regards theism, which depends on a stricter determination of the Deist's merely transcendent concept of the Supreme Being, they are very strong, and after [or according as] this concept is formed, in certain (in fact in all common) cases irrefragable. Hume always insists, that by the mere concept of an original being, to which we apply only ontological predicates (eternity, omnipresence, omnipotence), we think nothing determinate, and that properties which can yield a concept *in concreto* must be superadded; that it is not enough to say, it is Cause, but we must explain the nature of its causality, for example that of an understanding and of a will. He then begins his attacks on the assertion itself, theism, as he had previously directed his battery only against the proofs of deism, an attack which is not very dangerous in its consequences. All his dangerous arguments refer to anthropomorphism, which he holds to be inseparable from theism, and to make it absurd in itself; but if the former be abandoned, the latter must vanish with it, and nothing remain but deism, of which nothing can come, which is of no value, and which cannot serve as any foundation to religion or morals. If this anthropomorphism were really unavoidable, no proofs whatever of the existence of a Supreme Being, even were they all granted, could determine for us the concept of this Being without involving us in contradictions.

If we connect with the command to avoid all transcendent judgments of pure reason, the command (which apparently conflicts with it) to proceed to concepts that lie beyond the field of its immanent (empirical) use, we discover that both can subsist together, but exactly at the *boundary* of all lawful use of reason. For this boundary belongs as well to the field of experience, as to that of the beings of thought, and we are thereby taught, as well, how these so remarkable Ideas serve merely for marking the bounds of human reason. [Thus we are told] on the one hand not to extend cognition of experience without limit, as if nothing but mere world remained for us to cognise, and yet, on the other hand, not to transgress the bounds of experience, and to think of judging about things beyond them, as things in themselves.

But we stop at this boundary if we limit our judgment merely to the relation, which the world may have to a Being, whose very concept lies beyond all the knowledge which we can attain within the world. For we then do not attribute to the Supreme Being any of the properties *in themselves*, by which we represent objects of experience, and thereby avoid *dogmatic* anthropomorphism; but we attribute them to his relation to the world, and allow ourselves a *symbolical* anthropomorphism, which in fact concerns language only, and not the object itself.

If I say that we are compelled to consider the world, *as if* it were the work of a Supreme Understanding and Will, I really say nothing more, than that a watch, a ship, a regiment, bears the same relation to the watchmaker, the shipbuilder, the commanding officer, as the world of sense (or whatever constitutes the substratum of this complex of phenomena) does to the Unknown, which I do not hereby cognise as it is in itself, but as it is for me or in relation to the world, of which I am a part.

§ 58. Such a cognition is *analogical*, which does not signify, as is commonly understood, an imperfect similarity of two things, but a perfect similarity of relations between two quite dissimilar things.[1]

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[1] There is an analogy between the juridical relation of human actions and the mechanical relation of motive powers; I never can do anything to another man without giving him a right to do the same to me on the same conditions; as no body can act with its motive power on another body without thereby occasioning the other to react equally against it. Here right and motive power are quite dissimilar things, but in their relation there is complete similarity. By means of such an analogy I can obtain a notion of the relation of things, which absolutely are unknown to me. For instance, as the promotion of the fortune of children (= a) is to the love of parents (= b), so the welfare of the human species (= c) is to that unknown [quality] in God (= x), which we call love; not as if it had the least similarity to any human inclination, but because we can suppose its relation to the world

By means of this analogy, however, there remains a concept of the Supreme Being sufficiently determined *for us*, though we have left out everything that could *determine it absolutely or in itself*; for we determine it as regards the world and as regards ourselves, and more we do not require. The attacks which Hume makes upon those who would determine this concept absolutely, by taking the materials for so doing from themselves and the world, do not affect us; and he cannot object to us, that we have nothing left if we give up the objective anthropomorphism of the concept of the Supreme Being.

For let us assume at the outset (as Hume in his dialogues makes Philo grant Cleanthes), as a necessary hypothesis, the *deistical* concept of the First Being, in which this Being is thought by the mere ontological predicates of substance, of cause, &c. *This must be done*, because reason, actuated in the sensible world by mere conditions, which are themselves always conditional, cannot otherwise have any satisfaction, and *it therefore can be done* without falling into anthropomorphism (which transfers predicates from the world of sense to a Being quite distinct from the world), as those predicates [which we propose

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to be similar to that which things of the world bear one another. But the concept of relation in this case is a mere category, viz., the concept of cause, which has nothing to do with sensibility.

to use] are mere categories, which, though they do not give a determinate concept of him, yet give a concept not limited to any conditions of sensibility. [Granting this then] nothing can prevent our predicating of this Being *a causality through Reason* with regard to the world, and thus passing to theism, without being forced to attribute to him in himself this reason, as a property inhering in him. For as to *the former*, the only possible way of prosecuting the use of reason in the world of sense (as regards all possible experience, in complete harmony with itself,) to the highest point, is to assume a Supreme Reason as a cause of all the connexions in the world: such a principle must be thoroughly advantageous to our Reason, but can hurt it nowhere in its natural use. *Secondly*, Reason is thereby not transferred as a property to the First Being in himself, but *to his relation* to the world of sense, and so anthropomorphism is entirely avoided. For nothing is considered here but the *Cause* of the rational form [Vernunftform], which is perceived everywhere in the world, and reason is attributed to the Supreme Being, so far as it contains the ground of this rational form of the world, but analogically only, that is, so far as this expression shows merely the relation, which the Supreme Cause unknown to us has to the world, in order to determine everything in it conformably to reason in the highest degree. We are thereby kept from using this [human] attribute, Reason, for the purpose of conceiving *God* by means of it, instead of conceiving *the world* in the manner which is necessary, in order to have the greatest possible systematic use of reason *with regard to it.*[1] We thereby acknowledge, that the Supreme Being is quite inscrutable and even incogitable *in any determinate way* as to what he is *per se.* We are thereby kept, on the one hand, from making a transcendent use of the concepts which we have of reason as an efficient cause (by means of the will), in order to determine the Divine Nature by properties, which are only borrowed from human nature, and from losing ourselves in gross and extravagant notions; and on the other hand [we are kept] from deluging the contemplation of the world with hyperphysical modes of explanation according to our notions of human reason, which we transfer to God, and so losing for this contemplation its proper destination, according to which it should be a rational study of mere nature, and not a presumptuous derivation of its phenomena from a Supreme Reason. The expression suited to our feeble notions is, that we conceive the world *as if* it came, as to its existence and internal determination, from a Supreme Reason, by which notion we both cognise the constitution, which belongs to it (the world) itself, yet without pretending to determine the nature of its cause *per se*, and on the other hand we place the ground of this constitution (of the rational form in the world) *in the relation* of the Supreme Cause to the world, without finding the world sufficient by itself for that purpose.[1]

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[1] This whole section is very inaccurately and confusedly written. The italics in this sentence are mine. M.

And thus the difficulties, which seem to oppose theism, disappear by combining with Hume's principle—'not to carry the use of reason dogmatically beyond the field of all possible experience'—this other principle, which he quite overlooked: 'not to consider the field of experience as one which limits itself in the eye of our reason.' The *Critick of Pure Reason* here points out the true mean between dogmatism, which Hume combats, and scepticism, which he would substitute for it—a mean which is not like other means that we find advisable to determine for ourselves as it were mechanically (by adopting something from one side and something from the other), and by which nobody is taught a better way, but such an one, as can be accurately determined on principles.

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[1] I may say, that the causality of the Supreme Cause holds the same place with regard to the world that human reason does with regard to its works of art. Here the nature of the Supreme Cause itself remains unknown to me: I only compare its effects (the order of the world) which I know and their conformity to reason, to the effects of human reason which I also know; and hence I term the former reason, without attributing to it on that account what I understand in man by this term, or attaching to it anything else known to me, as its property.

§ 59. At the beginning of this observation I made use of the metaphor of a *boundary*, in order to establish the limits of reason in regard to its suitable use. The world of sense contains merely phenomena, which are not things in themselves, which (*noumena*) therefore the understanding must assume. In our Reason both are comprised, and the question is, how does reason proceed to bound the understanding as regards both these fields? Experience, which contains all that belongs to the sensuous world, does not bound itself; it only attains from every conditioned to some other equally conditioned object. Its limit must lie quite without it, and this field is that of the pure beings of the understanding. But this field so far as the *determination* of the nature of these beings is concerned, is an empty space for us, and if dogmatically-determined concepts alone are in question, we cannot pass out of the field of possible experience. But as a boundary itself is something positive, which belongs as well to that which lies within, as to the space that lies without the given complex, it is still a really positive cognition, which reason only acquires by enlarging itself to this boundary, yet without attempting to pass it; because it there finds itself in presence of an empty space, in which it can conceive forms of things, but not things themselves, But the *bounding* of the field of the understanding by something, which is otherwise unknown to it, is still a cognition which remains to reason even at this stand-point, and by which it is neither shut up within the sensible, nor does it stray without it, but confines itself, as befits the knowledge of a boundary, to the relation between that which lies without it, and that which is contained within it.

Natural theology is a concept of that sort at the boundary of human reason, because we are obliged to look beyond this boundary to the Idea of a Supreme Being (and, in morals to that of an intelligible world also). [We do this] not in order to determine anything relatively to this mere being of the understanding, and consequently beyond the world of sense, but in order to guide the use of reason within it according to principles of the greatest possible (theoretical as well as practical) unity. For this purpose we make use of the reference of the world of sense to a self-sufficient reason, as the cause of all its connexions. But [we do this] not in order merely to invent a being for ourselves, but, as beyond the sensible world there must be something thought only by the pure understanding, to *determine* that something in this particular way, though only of course according to analogy.

And thus there remains our original proposition, which is the result of the whole *Critick*: 'that reason by all its *a priori* principles never teaches us anything more, than objects of possible experience, and even of these nothing more than can be cognised in experience.' But this limitation does not prevent the reason leading us to the objective *boundary* of experience, viz., to the *reference* to something which is not itself an object of experience, but is the ground of all experience. Reason does not however teach us anything concerning the thing in itself, it only instructs us as regards its own complete and noblest use in the field of possible experience. But this is all that can be reasonably desired in the present case, and with which we have cause to be satisfied.

§ 60. Thus we have fully exhibited Metaphysic as it is actually given in the *natural predisposition* of human reason, and in that which constitutes the essential end of its pursuit, [and have explained it] according to its subjective possibility. Yet we have found, that this *merely natural* use of such a predisposition of our reason, if no discipline arising only from a scientific critick bridles and sets limits to it, involves us in transcendent, either apparently or really conflicting, *dialectical* syllogisms. We here also found this fallacious Metaphysic not only unnecessary as regards the promotion of our knowledge of nature, but even disadvantageous to it. There still therefore remains a problem worthy of solution, to find out the *natural ends* intended by this disposition to transcendent concepts in our reason, because everything that lies in nature must be originally intended for some useful purpose.

Such an inquiry is here out of place: and I acknowledge, that what I can say about it is conjecture only, like every speculation about the first ends of nature. It may be allowed me in this case only, as the question does not concern the objective validity of metaphysical judgments, but our natural predisposition to them, and therefore belongs to anthropology, outside the system of Metaphysic.

When I [consider[1]] all the transcendental Ideas, the complex of which constitutes the real problem of natural pure reason, and compels it to quit the mere contemplation of nature, to transcend all possible experience, and in this endeavour to produce the thing (be it knowledge or nonsense) called Metaphysic, I think I perceive, that the aim of this natural tendency is, to free our notions from the fetters of experience and from the limits of the mere contemplation of nature so far as at least to open to us a field, which contains mere objects for the pure understanding, which no sensibility can reach. [We do this] not indeed with the view of speculatively occupying ourselves with them (because we can find no ground to stand on), but, in order that practical principles [may be secured], which, without finding some such scope for their necessary expectation and hope, could not expand to the universality, which reason unavoidably requires from the moral point of view.

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[1] There is no verb in the original, as also below.

So I find the *Psychological Idea* (however little it may reveal to me the nature of the human soul), which is pure and raised above all concepts of experience, yet shows the insufficiency of these concepts plainly enough, and thereby deters me from materialism, as a notion unfit for any explanation of nature, and besides confining reason [unduly] in the practical direction. The *Cosmological Ideas*, by the obvious insufficiency of all possible cognition of nature to satisfy reason in its lawful inquiry, serve in the same manner to keep us from naturalism, which asserts nature to be sufficient for itself. Finally, all natural necessity in the sensible world is conditional, as it always presupposes the dependence of things upon others, and unconditional necessity must be sought only in the unity of a cause distinguished from the world of sense. But as the causality of this cause, in its turn, were it merely nature, could never render the existence of the contingent (as its consequent) comprehensible, Reason frees itself by means of the *Theological Idea* from fatalism (both as a blind natural necessity in the coherence of nature itself, without a first principle, as well as a blind causality of this principle itself), and leads to the concept of a cause possessing liberty, or of a

Supreme Intelligence. Thus the transcendental Ideas serve, if not to instruct us positively, at least to destroy the rash assertions of *Materialism*, of *Naturalism*, and of *Fatalism*, and thus to afford scope for the moral Ideas beyond the field of speculation. These considerations, I should think, explain in some measure the natural predisposition of which I spoke.

The practical value, which a merely speculative science may have, lies without the [strict] bounds of this science, and can therefore be considered as a *scholion* merely, and like all scholia does not form part of the science itself. This application however surely lies within the bounds of philosophy, especially of philosophy drawn from the pure sources of reason, where its speculative use in Metaphysic must necessarily be at unity with its practical use in morals. Hence the unavoidable dialectic of pure reason, considered in Metaphysic as a natural tendency, deserves to be explained not as an illusion merely, which is to be removed, but also, if possible, as a *natural provision* in its end, though this duty, a work of supererogation, cannot justly be assigned to Metaphysic proper.

The solutions of the questions which occupy from page 410 of the *Critick* to page 432, should be considered a second *scholion*, which however has a greater affinity with the content of Metaphysic. For there certain rational principles are expounded, which determine *a priori* the order of nature or rather of the understanding, which seeks nature's laws through experience. They seem to be constitutive and legislative with regard to experience, though they spring from mere Reason, which cannot be considered, like the understanding, as a principle of possible experience. Now does this harmony rest upon the fact, that just as nature does not inhere in phenomena or in their source (the sensibility) *per se*, but only in so far as the latter is in relation to the understanding, so thorough unity in applying the understanding to obtain a collective possible experience (in a system) can only belong to the understanding when in relation to Reason? and is experience in this way mediately subordinate to the legislation of Reason? The answer may be discussed by those, who desire to trace the nature of reason, even beyond its use in Metaphysic, into the general principles of systematising a history of nature; I have represented this problem as important, but not attempted its solution, in the book itself.[1]

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[1] It was my constant design through the *Critick* to neglect nothing, were it ever so dark, that could complete the inquiry into the nature of pure reason. Every body may afterwards carry his researches as far as he pleases, when he has been merely shown what yet remains to be done, a duty reasonably to be expected from those who have made it their business to sur-

And thus I conclude the analytical solution of the problem I had proposed: How is metaphysic in general possible? by ascending from the facts, where the use of the science is actually given, at least in its consequences, to the grounds of its possibility.

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vey the whole of this field, in order to consign it to others for future allotment and cultivation. And to this branch both the *scholia* belong, which will hardly recommend themselves by their dryness to amateurs, and hence are added for competent judges only.

SOLUTION OF THE GENERAL QUESTION OF THE PROLEGOMENA.

How is Metaphysic possible as a Science?

METAPHYSIC, as a natural tendency of reason, is real, but when isolated (as the analytical solution of the third principal question showed) dialectical and illusory. If we think of taking principles from it, and following in their use the natural, but on that account not less false, illusion, we can therefore never produce science, but only a vain dialectical art, in which one school may overcome another, but none can ever acquire a just and lasting approbation.

In order that as a science it may claim not mere fallacious plausibility, but insight and conviction, a *Critick of the Reason* must itself exhibit the whole stock of *a priori* concepts, their division according to their various sources (Sensibility, Understanding, and Reason), together with a complete table of them, and the analysis of all these concepts, with all their consequences.

It must also exhibit, especially by means of the deduction of these concepts, the possibility of synthetical cognition *a priori*, the principles of its use and finally its bounds, all in a complete system.[1] *Critick* therefore, and *Critick* alone, contains in itself the whole well proved and tested plan, and even all the means required to accomplish Metaphysic as a science; by other ways and means it is impossible. The question here therefore is not so much how this performance is possible, as how to set it going, and induce men of clear heads to quit their hitherto perverted and fruitless cultivation for one that will not deceive, and how such a union for the common end may best be directed.

This much is certain, that whoever has once tasted critick, will be ever after disgusted with all dogmatical slops, which he formerly put up with, because his reason must have something, and could find nothing better for its support. Critick stands in the same relation to the common Metaphysic of the schools, as *chemistry* does to *alchemy*, or as *astronomy* to prognosticating *astrology*. I pledge myself, that nobody who has read through and through, and grasped the principles of, the *Critick*, even in these Prolegomena only, will ever return to that old and sophistical mock science; but will rather with a certain delight look forward to Metaphysic, which is now indeed in his power, and requires no more preparatory discoveries, and which can at last afford permanent satisfaction to reason. For here is an advantage upon which, of all possible sciences, Metaphysic alone can with certainty reckon: that it can be brought to such completion and fixity as to be incapable of farther change, or of any augmentation by new discoveries; because here reason has the sources of its knowledge not in objects and their intuition (by which too it cannot be farther informed), but in itself. When therefore it has exhibited the fundamental laws of its faculty completely, and so determinately as to avoid all misunderstanding, there remains nothing for pure reason to cognise *a priori*, nay, even for it to inquire into on [reasonable] grounds. The sure prospect of knowledge so determinate and so self-contained[1] has a peculiar charm, even though we should set aside all its advantages of which I shall hereafter speak.

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[1] I may note, as a specimen of Kant's style, that in the original there are seventy-two words in this paragraph between the subject and the verb. M.

All false art, all vain wisdom lasts its time, but finally destroys itself, and its highest culture is also the epoch of its decay. That this time is come for Metaphysic appears from the state into which it has fallen among all learned nations, despite of all the zeal, with which other sciences of every kind are prosecuted. The old arrangement of our university studies still preserves its shadow, a single Academy of sciences tempts men now and then, by offering prizes, to write essays on it, but it is no longer numbered among thorough sciences, and let any one judge for himself how a man of parts, if he were called a great metaphysician, would receive the compliment, which may be well-meant, but is scarce envied by anybody.

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[1] This word does not adequately render the untranslateable original *Geschlossenes*. M.

Yet, though the period of the downfall of all dogmatical metaphysic has undoubtedly arrived, we are yet far from being able to say, that the period of its regeneration is come by means of a thorough and complete *Critick of the Reason.* All transitions from a tendency to its contrary pass through the stage of indifference, and this moment is the most dangerous for the author, but, in my opinion, the most favourable for the science. For, when party spirit has died out by a total dissolution of former connexions, minds are in the best state to receive, but gradually, proposals for a combination according to a new plan.

When I say, that I hope these Prolegomena will excite investigation in the field of critick, and afford a new and promising object to sustain the general spirit of philosophy, which seems on its speculative side to want sustenance, I can imagine beforehand, that every one, whom the thorny paths of my *Critick* have tired and put out of humour, will ask me, upon what I found this hope? My answer is, *upon the irresistible law of necessity.*

That the human mind will ever give up metaphysical researches entirely, is as little to be expected, as that we should prefer to give up breathing altogether, to avoid inhaling impure air. There will therefore always be Metaphysic in the world, nay every one, especially every man of reflection, will have it, and for want of a recognised standard, will shape it for himself after his own pattern. What has hitherto been called Metaphysic, cannot satisfy any accurate mind, but to forego it entirely is impossible; therefore a *Critick of Pure Reason* itself must now be *attempted* or, if one exists, *investigated*, and brought to the full test, because there is no other means of supplying this pressing want, which is something more than mere thirst for knowledge.

Ever since I have come to know Critick, when I have finished reading a book of metaphysical contents, which, by the preciseness of its notions, by variety, order, and an easy style, was not only entertaining but improving, I cannot refrain from asking, *Has this author indeed advanced metaphysic a single step?* The learned men, whose works have been useful to me in other respects and always contributed to the culture of my mental powers, will, I hope, forgive me for saying, that I have never been able to find either their essays or my own less important ones (though self-love may recommend them to me), to have advanced the science in the least. And here is the very obvious reason: that the science did not then exist, and cannot be gathered piecemeal, but its germ must be fully preformed in the *Critick.* But in order to prevent all misconception, we must remember what has been already said, that by the analytical treatment of our concepts the understanding gains indeed a great deal, but the science (of metaphysic) is not the least advanced, because these dissections of concepts are nothing but the materials, from which the science still remains to be built. Let the concepts of substance and of accident be ever so well dissected and determined; all this is very well as a preparation for some future use. But if we cannot prove, that in all which exists the substance endures, and only the accidents vary, science is not the least advanced by all our analyses. Metaphysic has hitherto never been able to prove *a priori* either this proposition, or that of Sufficient Reason, still less any more composite one, such as belongs to [rational] psychology or cosmology, or indeed any synthetical proposition. By all its analysis therefore nothing is effected, nothing obtained or forwarded, and the science, after all this bustle and noise, still remains as it was in the days of Aristotle, though far better preparations were made for it than of old, if the clue to synthetical cognitions had only been discovered.

If any one thinks himself insulted, he may easily refute my charge by producing a single synthetical proposition belonging to Metaphysic, which he proposes to prove dogmatically *a priori*, for until he has performed this feat, I shall not grant that he has really advanced the science; even should that proposition be sufficiently confirmed by common experience. No demand can be more moderate or more equitable, and in the (infallibly certain) event of its non-performance, no assertion more just, than that hitherto Metaphysic has never existed as a science.

But there are two things which, in case the challenge be accepted, I must deprecate: first, trifling about *probability* and conjecture, which are suited as little to metaphysic, as to geometry; and secondly, the decision by means of the wand of *sound common sense*, which every one does not wave, but which accommodates itself to personal peculiarities.

For *as to the former*, nothing can be more absurd, than in Metaphysic, a philosophy from pure reason, to think of grounding our judgments upon probability and conjecture. Every thing that is to be cognised *a priori*, is thereby announced as apodictically certain, and must therefore be proved in this way. We might as well think of grounding geometry or arithmetic upon conjectures; for as to the doctrine of chances in the latter, it does not contain probable, but perfectly certain judgments concerning the degree of the probability of certain cases, under given uniform conditions, which, in the sum of all possible cases, infallibly happen according to the rule, though it is not sufficiently determined in respect to every single chance. Conjectures (by means of induction and of analogy) can be suffered in an empirical science of nature only, yet even there the possibility at least of what we assume must be quite certain.

The appeal to sound sense is even more absurd, when concepts and principles are announced as valid, not in so far as they hold with regard to experience, but even beyond the conditions of experience. For what is *sound sense* [Verstand]? It is *common sense*, so far as it judges right. But what is common sense? It is the faculty of the knowledge and use of rules *in concreto*, as distinguished from the *speculative understanding*, which is a faculty of knowing rules *in abstracto*. Common sense can hardly understand the rule, 'that every event is determined by means of its cause,' and can never comprehend it thus generally. It therefore demands an example from experience, and when it hears, that this rule means nothing but what it always thought when a pane was broken or a kitchen-utensil missing, it then understands the principle and grants it. Common sense therefore is only of use so far as it can see its rules (though actually present in it *a priori*) confirmed by experience; consequently to comprehend them *a priori*, or independently of experience, belongs to the speculative understanding, and lies quite beyond the horizon of common sense. But the province of Metaphysic is entirely confined to the latter kind of knowledge, and it is certainly a bad index of sound sense to appeal to the witness, which cannot here form any opinion whatever, and on which men look down with contempt until they are in difficulties, and can find in their speculation neither counsel nor help.

It is a common subterfuge of those false friends of common sense (who occasionally prize it highly, but usually despise it) to say, that there must surely be at all events some propositions, which are immediately certain, and of which there is no occasion to give any proof, or even any account at all, because we otherwise could never stop inquiring into the grounds of our judgments.[1] But if we except the principle of contradiction, which is not sufficient to show the truth of synthetical judgments, they can never adduce, in proof of this privilege, anything else indubitable, which they can immediately ascribe to common sense, except mathematical propositions, such as twice two make four, between two points there is but one straight line, &c. But these are judgments immensely distinct from those of Metaphysic. For in Mathematic I myself can by thinking make (construct) whatever I represent to myself as possible by a concept: I add to the first two the other two, one by one, and myself make the number four, or I draw in thought from one point to another all manner of lines, and can draw one only, which is like itself in all its parts (equal as well as unequal). But I cannot, by all my power of thinking, extract from the concept of a thing the concept of something else, whose existence is necessarily connected with the former, but must call in experience. And though my understanding furnishes me *a priori* (yet only in reference to possible experience) with the concept of such a connexion (of causation), I cannot exhibit it, like the concepts of mathematic, by intuition, *a priori*, and so show its possibility *a priori*. So this concept, together with the principles of its application, always requires, if it shall hold *a priori*—as is requisite in Metaphysic—a justification and deduction of its possibility, because we cannot otherwise know how far it holds good, and whether it can be used in experience only or beyond it also. In Metaphysic, then, as a speculative science of pure reason, we can never appeal to common sense, but may only do so when we are forced to quit it, and to give up all pure speculative cognition (which must always be science), and consequently [to give up] metaphysic itself, and its instruction. [This may happen] on certain occasions, when a reasonable faith only is found possible for us, and sufficient to our wants (perhaps even more salutary than science itself). For in this case the attitude of the question is quite altered. Metaphysic must be science not only as a whole, but in all its parts, otherwise it is nothing; because, as a speculation of pure reason, it has a footing nowhere else than on general views. Beyond it, however, probability and sound sense may be used with advantage and justly, but on quite special principles, of which the importance always depends on the reference to practice.

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[1] These remarks are probably written with the Scottish School in view. M.

This is what I hold myself justified in requiring for the possibility of Metaphysic as a science.

APPENDIX

On what can be done to realise Metaphysic as a Science.

As no means hitherto used have attained this end, which without a preceding critick of pure reason will never be attained, it is fair to expect that the essay, which is now before the public, should be submitted to an accurate and careful scrutiny, except it be thought more advisable to give up all pretensions to Metaphysic, in which case, if men but adhere to their purpose, nothing can be said against it. If we take the course of things as it is, not as it ought to be, there are two sorts of judgments, *one a judgment which precedes investigation*—in our case one in which the reader from his own Metaphysic pronounces judgment on the *Critick of Pure Reason* (which was intended to discuss the very possibility of metaphysic). The other is a judgment *subsequent to investigation*, in which the reader is enabled to waive for awhile the consequences of the critical researches that may be repugnant to his formerly adopted metaphysic, and first examines the grounds whence those consequences are derived. If what common metaphysic propounds were demonstrably certain (like geometry, for instance), the former way of judging would hold good; for if the consequences of certain principles are repugnant to established truths, these principles are false, and without farther inquiry to be repudiated. But if Metaphysic does not possess a stock of indisputably certain (synthetical) propositions, and should it even be the case that there are a number of them, which, though among the most specious, are by their consequences in mutual collision, and if no sure criterion of the truth of really metaphysical (synthetical) propositions is to be met with in it, then the former way of judging cannot obtain, but the investigation of the principles of the *Critick* must precede all judgment as to its value.[1]

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[1] I omit the polemical discussion which follows in answer to the Review of the *Critick* in the Göttingen *Gelehrte Anzeigen*, and in praise of the *Gotha Review*. M.

APPENDICES,

CONTAINING

TRANSLATIONS OF THE PRINCIPAL PASSAGES IN THE CRITICK OF THE PURE REASON ALTERED IN THE SECOND (AND FOLLOWING) EDITIONS, AND OF PART OF THE CRITICAL SOLUTION OF THE THIRD ANTINOMY.

A. On the Deduction of the Categories.

B. On the Distinction between Noumena and Phenomena.

C. On the Paralogisms of Rational Psychology.

D. On the Intelligible and the Empirical Character.

APPENDIX A.

DEDUCTION OF THE PURE CONCEPTS OF THE UNDERSTANDING.

§ 2. *Of the a priori Grounds of the Possibility of Experience.*

THAT a concept should be generated completely *a priori*, and have relation to an object, without itself belonging to the [general] notion of possible experience, or being made up of the elements of possible experience[1]—this is perfectly self-contradictory and impossible. For such a concept would have no content, because no intuition would correspond to it; since intuitions in general, by which objects are capable of being given to us, make up the field, or total object, of possible experience. A concept *a priori*, which did not refer to such intuitions, would be only the logical form for a concept, but not the very concept itself, through which something is thought.

If there be then pure concepts *a priori*, these indeed can of course contain nothing empirical; they must, nevertheless, be merely *a priori* conditions of possible experience, as upon this alone can their objective reality rest.

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[1] By possible experience Kant means that which can possibly become experience. M.

If we wish, then, to know how pure concepts of the understanding are possible, we must inquire what are the *a priori* conditions on which the possibility of experience depends, and which form its foundation, when we abstract from all that is empirical in phenomena? A concept which expresses this formal and objective condition of experience universally and adequately might be denominated a pure concept of the understanding. Having once obtained pure concepts of the understanding, I can, if I like, also excogitate objects, perhaps impossible, perhaps possible *per se*, but given in no experience; since I may omit in the connexion of these concepts something which still necessarily belongs to the conditions of possible experience (*e.g.* the notion of a spirit); or else I may extend pure concepts of the understanding farther than experience can reach (*e.g.* the notion of the Deity). But the *elements* of all *a priori* cognitions, even those of capricious and absurd chimeras, cannot indeed be borrowed from experience (or they would not be *a priori* cognitions), but must in every case contain the pure *a priori* conditions of possible experience, and of an object thereof; otherwise we should not only be thinking nothing by means of such chimeras, but they themselves, having no starting-point, could not even originate in thought.

Now these concepts, which contain *a priori* the pure thinking in each individual experience, we find in the Categories; and it will be a sufficient deduction of them, and a justification of their objective validity, if we prove that through them alone can an object be thought But, as in such a thought there is more than the mere faculty of thinking—that is, the understanding—concerned; and as this faculty, considered as a cognitive faculty, which must relate to objects, will also require some explanation, with regard to the possibility of such relation; we must, accordingly, first discuss the subjective sources[1] which constitute the *a priori* foundation of the possibility of experience, not according to their empirical, but according to their transcendental, nature.

If each individual representation were quite estranged from the rest, so as to be as it were isolated and separated from them, such a thing as knowledge never could come into existence; for knowledge means a totality of compared and connected representations. If then I add to sense, because it contains multiplicity in its intuition, a synopsis, to this synopsis must correspond in every case a synthesis; and it is only when combined with *spontaneity* that *receptivity*[2] can make cognitions possible. This spontaneity, then, is the foundation of a threefold synthesis, which necessarily occurs in all knowledge: first, the *apprehension* of representations, as modifications of the mind in intuition; secondly, the *reproduction* of them in the imagination; and, thirdly, their *recognition* in the concept. These point to three subjective sources of cognition which render possible the understanding itself, and through it experience also, as an empirical product of the understanding.

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[1] This is the aspect omitted in the Second Edition, and alluded to in the first Preface. Cf. vol. i. p. 7. M.

[2] This passage may imply that a receptivity *by itself* is passive. M.

PREFATORY REMARK.

The deduction of the Categories is involved in such difficulties, and compels us to penetrate so deeply into the original causes and conditions of the possibility of our knowledge in general, that in order to avoid the diffuseness of a complete theory, and at the same time to omit nothing in so necessary an investigation, I have thought it better, in the four following paragraphs, rather to prepare than instruct the reader, and not to lay before him the systematic discussion of these elements of the understanding till the succeeding third section. I hope the reader will not permit the obscurity he at first meets to deter him, as such obscurity is unavoidable in entering upon a wholly untrodden path, but will, I hope, be perfectly removed in the section to which I have referred.

1. *Of the Synthesis of Apprehension in Intuition.*—From whatsoever source our representations arise—whether through the influence of external things, or from internal causes[1]—whether they originate *a priori*, or empirically, they must nevertheless belong as phenomena (being modifications of our minds) to the internal sense; and, as such, all our cognitions must ultimately be subject to the formal condition of our internal sense—Time—as being that in which they are all ordered, connected, and brought into relation. This general remark must be above all things kept carefully in view throughout the following discussion.

Every intuition contains in itself a multiplicity, which nevertheless would not be represented as such, if the mind did not distinguish *time* in the sequence of impressions one upon another; for, so far *as it is contained in a single instant*, no representation could ever be anything but an absolute unity. In order, then, to make out of this manifold an unity of intuition (as, for example, in the representation of space),[1] it is in the first instance necessary to run through the multiplicity, and then grasp it together—an action which I call *synthesis of apprehension*, as being directed immediately towards intuition, which indeed presents to us multiplicity, but which without a simultaneous synthesis cannot produce it as such, and also as contained in one representation.

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[1] This looks very like a suggestion of Realism in the First Edition. M.

Now this synthesis of apprehension must also be carried out *a priori*, that is to say, in the case of representations which are not empirical. For without it we could not have representations either of space or time *a priori*, as these can only be generated by means of the synthesis of the manifold, which [manifold] the sensibility offers in its original receptivity. We have then a pure synthesis of apprehension.

2. *Of the Synthesis of Reproduction in the Imagination.*—It is indeed only an empirical law, according to which representations which have often accompanied or followed one another at length become associated, and so form a connexion, according to which, even in the absence of the object, one of these representations produces a transition of the mind to another, by a fixed rule. But this law of reproduction presupposes that phenomena themselves are really subject to such a rule,

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[1] The reader should here notice the element omitted (for the sake of simplicity) in Kant's Aesthetic, and to which he afterwards refers, *Critick*, p. 98, *note*. M.

and that in the multiplicity of their representations there is a concomitance or sequence, according to a fixed rule; for otherwise our empirical imagination would never find anything to do suited to its nature, and would consequently remain hidden within the depths of the mind as a torpid faculty, not even known to consciousness. Supposing vermilion were at one time red, at another black—at one time heavy, at another light; were a man changed first into one, then into another animal—were our fields covered on the longest day, at one time with corn, at another with ice and snow—then my empirical faculty of imagination would never have had even the opportunity of thinking of the heavy vermilion, when red colour was presented to it; or again, were a certain word applied first to one thing, then to another, or the same thing called by different names, without the control of a fixed law, to which the phenomena are already themselves subject, there could be no empirical synthesis of reproduction.

There must, then, be something which makes even the reproduction of phenomena possible, by being the *a priori* foundation of a necessary synthetical unity among them. But we very soon hit upon it when we reflect that phenomena are not things in themselves, but the mere play of our representations, which are, after all, only determinations of our internal sense. For if we can make it plain that even our purest *a priori* intuitions afford us no knowledge, except so far as they contain a combination of multiplicity only to be produced by a thoroughgoing synthesis of reproduction, then the synthesis of the imagination must also be founded *a priori* on a principle prior to all experience, and we must assume a pure transcendental synthesis of the imagination, which lies at the very foundation of even the possibility of any experience (being necessarily presupposed by the possibility of reproducing phenomena). Now, it is plain that if I draw a line in thought, or think of the time from to-day at noon to to-morrow at the same hour, or even wish to represent to myself any definite number, first of all I must necessarily grasp in thought these manifold representations successively. But if I lost out of mind, and could not reproduce the earlier parts (the first part of the line, the prior portions of the time, or the successively represented unities), whilst I proceed to the succeeding ones, there never could arise a complete representation, nor any of the thoughts just named—nay, not even the first and purest fundamental representations of space and time.

The synthesis of apprehension, then, is inseparably connected with that of reproduction. And as the former is the transcendental foundation of the possibility of any cognitions at all (not only of the empirical, but of the pure *a priori* also), the reproductive synthesis of the imaginative faculty is one of the transcendental operations of the mind; and, in reference to these, we shall name this faculty the transcendental imagination.[1]

3. *Of the Synthesis of Recognition in the Concept.*—Without the consciousness that what we now think is identical with what we thought a moment ago, all reproduction in the series of representations would be useless. For what we now think would be a new representation at the present moment, not at all belonging to the act by which it should have been gradually pro-

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[1] I use the word *imagination* throughout for the *faculty*, not for its *object*. M.

duced; and the manifold thereof would never make up a totality, because it must want that unity which consciousness alone can give it. If in counting I were to forget that the unities which are now pictured to my senses were added by me gradually to one another, I should not cognise the generation of quantity by the successive addition of unit to unit, nor, consequently, should I know number; for this concept consists essentially in the consciousness of the unity of the synthesis.

The very word concept might of itself lead us to this remark. For it is this *one* (single) consciousness which unites the *manifold*, gradually intuited, and then also reproduced, into *one* representation. This consciousness, too, may often be weak, so that we perceive it only in the result and not in the act, that is to say, we do not join it immediately with the generating of the representation; but notwithstanding these distinctions, we must always have *one* single consciousness, even though it does not stand forth with striking clearness, and without it concepts (and consequently knowledge of objects) are quite impossible.

And here it is necessary to make it clear what we mean by the expression: object of representations. We have said above, that phenomena are nothing but sensuous representations, and these again must be considered in the very same way, viz., not to be objects (beyond the faculty of representation). What do we mean, then, when we speak of an object corresponding to cognition, and yet distinct from it? It is easy to see that this object must be thought as something in general $= x$, because outside our cognition we surely possess nothing which we could place over against it, as corresponding to it.

But we find that our thought of the relation of cognition to its object carries with it some sort of necessity, since the object is considered to be that which prevents our cognitions from being determined at random or capriciously, but *a priori* in some certain way, because, by being referred to an object, they must also necessarily, in relation to that object, agree among themselves; that is to say, they must have that unity which constitutes the concept of an object.

But—since we are only concerned with the manifold of our representations, and the x which corresponds to them (the object), as it must be something different from our representations, can be to us nothing—it is clear that the unity which the object necessarily produces can be nothing else than the formal unity of consciousness in the synthesis of the multiplicity of representations. We say then: 'we cognise the object,' when we have produced in the manifold of intuition synthetical unity. But this unity would be impossible, unless we were able to produce the intuition by means of such a function of regular synthesis as renders necessary the reproduction of the *a priori* manifold, and also the concept in which it is united. We think, for example, of a triangle as an object, in that we are conscious of the combination of three right lines according to a rule by which such an intuition can at any time be brought before us. This unity of the rule determines all multiplicity, and limits it to conditions which make the unity of a perception possible; and the concept of this unity is the representation of object $= x$, which I think by means of the predicates already conceived in a triangle.

All cognition requires a concept, however incomplete or obscure; and this, in its very form, is something universal, and which serves as a rule. So the concept of body according to the unity of the manifold, which is thought by means of it, serves as a rule for our cognition of external phenomena. But it can only become a rule of intuition by representing, along with given phenomena, the necessary reproduction of their multiplicity, and conjointly the synthetical unity in the consciousness thereof. So the concept of body, when we perceive anything without us, makes the representation of extension, and with it that of solidity, figure, &c., necessary.

There is always a transcendental condition at the foundation of any necessity. Hence, we must be able to find a transcendental ground of the unity of consciousness in the synthesis of the manifold in all our intuitions, and in all our concepts of objects generally—consequently, in all objects of experience. Without this it would be impossible to think any object as belonging to our intuitions; for such object is nothing else than that something, of which the concept expresses such a necessity of synthesis.

This original and transcendental condition is no other than Transcendental Apperception. The consciousness of self, according to the determination of our states in internal perception, is merely empirical—always changeable; there can be no fixed or permanent self in this flux of our internal phenomena; and this sort of consciousness is usually called the *internal sense*, or *empirical apperception*. That which is *necessarily* represented as numerically identical, cannot be thought as such by means of empirical data. It must be a condition, anticipating and rendering possible all experience. This condition only can render valid such a transcendental assumption.

Neither can cognitions take place in us, nor any conjunction or unity among them, without this unity of consciousness, which is prior to all the data of intuition, and by reference to which alone all representation of objects is rendered possible. This pure, original, unchangeable consciousness, I intend to call *transcendental apperception*. That it deserves this name is plain from the fact, that even the purest objective unity, namely, that of *a priori* concepts (space and time), is only possible by the reference of intuitions to such consciousness. The numerical unity, then, of this apperception is just as much the *a priori* basis of all concepts, as the multiplicity of space and time is the basis of the intuitions of sensibility.

But this very transcendental unity of apperception forms a connexion according to laws of all the possible phenomena which can ever appear simultaneously in experience. For this unity of consciousness would be impossible if the mind, in the cognition of the manifold, were not self-conscious of the identity of the function by means of which it connects this manifold synthetically in a cognition. Consequently, the original and necessary consciousness of the identity of self is at the same time a consciousness of just as necessary an unity of the synthesis of all phenomena according to concepts; that is, according to rules which not only make the phenomena necessarily reproducible, but *ipso facto* also determine an object for (their) intuition, and this object is a concept of something in which they are necessarily connected. For the mind could not possibly think its own identity in the multiplicity of representations, and this too *a priori*, if it had not before its eyes (so to speak) the identity of its own action, which subjects all the empirical synthesis of apprehension to a transcendental unity, and is the necessary condition of the connexion of this apprehension according to rules. We shall now be able to determine more correctly our notion of an *object.* All representations have, as such, their object, and may themselves also become the objects of other representations. Phenomena are the only objects which can be given us immediately, and that which in the phenomenon refers immediately to the object is called intuition. These phenomena are not things *per se*, but themselves only representations, which, again, have *their* object, and this we can no longer intuite; it may therefore be called the non-empirical, or transcendental, object $= x$.

The pure concept of the transcendental object (which is really in all our cognitions of the same sort $= x$) is that which can obtain for all our empirical concepts in general reference to an object—that is, objective reality. Now this concept can contain no determinate intuition, and can therefore refer to nothing but that unity which must be found in the multiplicity of a cognition, so far as it stands in relation to an object. But this relation is merely the necessary unity of consciousness, and also of the synthesis of the manifold by a general function of the mind, which connects the manifold into one representation. Since this unity must be regarded as necessary *a priori* (otherwise the cognition would have no object), the relation to a transcendental object—that is, the objective reality of our empirical knowledge—depends on the transcendental law, that all phenomena (so far as objects are to be given us through them) must submit to the *a priori* rules of their synthetical unity, according to which their relation in empirical intuition is alone possible.

In short, phenomena must in experience stand under the conditions of the necessary unity of apperception, just as they must stand in mere intuition under the formal conditions of space and time; so that only through the former does any cognition become even possible.

4. *Preliminary Explanation of the Possibility of the Categories as a priori Cognitions.*—There is only *one* experience, in which all perceptions are represented in thoroughgoing and regular connexion; just as there is only *one* space and one time in which all forms of phenomena, and all relations of existence or non-existence, are found. When we speak of different experiences, they only mean so many perceptions, as far as they belong to one and the same universal experience. The thoroughgoing and synthetical unity of perceptions is exactly what constitutes the form of experience, and experience is nothing but the synthetical unity of phenomena according to concepts. Unity of synthesis according to empirical concepts would be quite contingent; and, were these not based on a transcendental ground of unity, it would be possible for a confused crowd of phenomena to fill our minds, without our ever forming experience from them. But then all reference of cognition to objects must vanish, because the connexion of experience according to universal and necessary laws would be wanting; we should then have thoughtless intuition, never amounting to knowledge, and so for us equivalent to nothing.

The *a priori* conditions of experience are, at the same time, the conditions of the possibility of the objects of experience.[1] Now I assert that the above-mentioned

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[1] That is to say, the [subjective] conditions of our minds,

Categories are nothing but the *conditions of thinking in possible experience*, just as *space and time are the conditions of the intuition* which is requisite for the same. The former, then, are likewise fundamental concepts which enable us to think objects in general for phenomena, and are, accordingly, objectively valid—the very point we wished to ascertain.

But the possibility, nay even the necessity, of these Categories depends upon the relation in which the whole sensibility, and with it all possible phenomena, must stand to primitive apperception ; in which apperception everything must necessarily accord with the conditions of the thoroughgoing unity of self-consciousness, which means that everything must be subject to universal functions of synthesis—synthesis according to concepts. By this means alone can apperception prove its thoroughgoing and necessary identity. For example, the concept of cause is nothing but a synthesis (of that which follows in the series of time with other phenomena) according to concepts, and without such an unity, which has its rule *a priori* and controls the phenomena, thoroughly universal and necessary unity of consciousness could not occur in the multiplicity of phenomena : in which case these phenomena would belong to no experience, and therefore be without any object, but only a random play of representations, less even than a dream.

All attempts, then, to deduce from experience these

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whereby alone we become capable of knowing objects, must also be the only possible [and therefore necessary] conditions of objects; for without submitting to these conditions, the objects cannot exist at all. It is idle to add *for us*, since no *noumenon* can properly be called an *object*. M.

pure concepts of the understanding, and to give them a merely empirical origin, are perfectly idle and useless. I waive the point that the concept, for example, of cause carries with it the feature of necessity, which could not be given by any experience, for this indeed teaches us, that something usually follows a certain phenomenon, but never that it must follow necessarily; nor could it teach us that we may conclude *a priori*, and quite universally, from the cause as a condition, to the effect. But this empirical rule of association, which we must of course assume as universally applicable, when we say that everything in the series of events is so strictly obedient to law, that nothing happens without being preceded by something upon which it always follows—this rule I say, as a law of nature, upon what does it depend? How, I ask, is this association even possible? The foundation of the possibility of this association of the manifold, as far as it lies in the object, is called the *affinity* of the manifold. I ask, then, what makes this thoroughgoing affinity of phenomena conceivable to you (by which they stand under, and *must* be subject to permanent laws)?

Upon my principles it is easily understood. All possible phenomena belong, as representations, to the whole of possible self-consciousness. But this being a transcendental representation, its numerical identity is indivisible and certain *a priori*, because we cannot possibly know anything, except through this primitive apperception. Now, as this identity must necessarily be introduced into the synthesis of all the manifold of phenomena, which are ever to become empirical cognition, the phenomena must be subject to *a priori* conditions, to which their synthesis (in apprehension) must thoroughly conform. The representation of a general condition, according to which a certain multiplicity *can* be brought before us (that is to say, a definite way of doing it), is called *Rule ;* if it *must* be so brought before us, *Law.* Consequently all phenomena stand in thorough connexion with one another according to necessary laws, and hence in a *transcendental affinity*, of which the *empirical* is merely the consequence.

That nature must conform to our subjective apperception—nay, even that its order must depend on this relation—probably sounds very absurd and strange. But if we reflect that this nature is nothing in itself but the sum total of phenomena, consequently nothing *per se*, but merely a number of mental representations, we need not be surprised that we see it subject to the radical faculty of all our *knowledge ;* that is to say, subject to transcendental apperception, and hence subject to that unity through which alone it can become the object of any possible experience; or, in other words, become nature. It is for the very same reason that we can cognise this unity *a priori*, and therefore necessarily, which would be impossible were it given *in itself*, independent of the highest sources of our thinking. In this latter case, I know not whence we could draw the synthetical propositions of such an universal unity of nature; for then we must borrow them from the objects of nature themselves. As this could only be done empirically, nothing could be inferred but a contingent unity, which is very far from being the necessary connexion which we mean by the word nature.

§ 3. *Of the Relation of the Understanding to Objects in general, and of the Possibility of Cognising them a priori.*

The detached observations made in the previous section we shall here unite and present in a connected form. There are three subjective sources of cognition, upon which rest the possibility of experience in general, and the cognition of objects; these are *Sense*, *Imagination*, and *Apperception*. Each of these can be considered empirically, that is, in its application to given phenomena; but all of them are also [original] elements [of the mind], and *a priori* conditions, which make even this empirical use possible. *Sense* represents phenomena empirically in *perception*, *Imagination*, in *association* (and reproduction; *Apperception*, in the *empirical consciousness* of the identity of these reproduced representations with the (original) phenomena, that is to say, in *Recognition*. But at the *a priori* basis of the whole of our perceptions lie pure Intuitions (or if we regard them as representations—the form of internal intuitions, time). At the basis of association lies the pure synthesis of the imagination; and at the basis of empirical consciousness, pure apperception; that is, the thoroughgoing identity of self in all possible representations. If we wish, then, to analyse the internal causes of this connexion of representations, till we reach the point where all representations must meet (in order to start with unity of cognition, which is the necessary condition of possible experience), we must begin from pure apperception. All intuitions are for us nothing, and do not the least concern us, if they cannot be taken up into consciousness, whether directly or indirectly, and only through this means is cognition at all possible. We are *a priori* conscious of our own complete identity in regard to all representations which can ever belong to our cognition; and this we regard as the necessary condition of the possibility of all representations. (For these only represent anything in me, by belonging, with all the rest, to one consciousness, in which they *can* at any rate be connected.) This principle is established *a priori*, and may be called the *transcendental principle of the unity* of all multiplicity in our representations (even in intuition). Now, the unity of multiplicity in one subject is synthetical. Pure apperception, then, gives us a principle of the synthetical unity of multiplicity in all possible intuition.[1]

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[1] Let us pay particular attention to this proposition, which is of the greatest importance. All representations have a necessary reference to a possible empirical consciousness; for if they had not this feature, and were it quite impossible to become conscious of them, this would mean that they do not exist. But all empirical consciousness has a necessary reference to a transcendental consciousness (preceding all particular experience), namely, the consciousness of self, as the primitive apperception. It is absolutely necessary that in my cognition all [acts of] consciousness should belong to one consciousness (of myself). Now this is a synthetical unity of the manifold (of consciousness) which is cognised *a priori*, and which gives just the same basis for synthetical *a priori* propositions which relate to pure thinking, as space and time give to such propositions as relate to the form of mere intuition. The synthetical proposition, that the various empirical consciousnesses must be combined in one single self-consciousness, is absolutely the first and synthetical principle of our thinking in general. But we must never forget, that the bare representation *Ego* is the transcendental consciousness in relation to all others (the collective unity of which it renders possible). This representation may then be clear (empirical consciousness)

But this synthetical unity presupposes or implies a synthesis; and if the former is to be necessary *a priori*, the latter must be an *a priori* synthesis. Consequently, the transcendental unity of apperception points to the pure synthesis of imagination, as an *a priori* condition of the possibility of any combination of the manifold into a single cognition. But it is only the *productive synthesis of the imagination* which can take place *a priori*; for the *reproductive* depends on empirical conditions. Consequently, before apperception, the principle of the necessary unity of the pure (productive) synthesis of the imagination is the foundation of the possibility of any knowledge, especially of experience.

We denominate the synthesis of multiplicity in the imagination transcendental, when, without distinguishing the intuitions, it aims at nothing but the combination of multiplicity *a priori*: and the unity of this synthesis is called transcendental, if, as referring to the original unity of apperception, it is represented as necessary *a priori*. Now, as this latter lies at the foundation of all cognitions, the transcendental unity of the synthesis of the imagination is the pure form of all possible cognition, by means of which all objects of possible experience must be represented *a priori*.

The unity of apperception in relation to the synthesis of the imagination is the *understanding*; and this very unity, in relation to the *transcendental* synthesis of the

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or obscure—a fact which is here of no importance; nay, not even the fact whether it have any reality or not; but the possibility of the logical form of all knowledge rests necessarily on the relation to this apperception *as a faculty*.

imagination, is the *pure* understanding. There are, then, in the understanding pure cognitions *a priori*, which contain the necessary unity of the pure synthesis of the imagination, in reference to all possible phenomena. But these are the Categories, or pure concepts of the understanding. Consequently, the empirical faculty of cognition which belongs to our nature contains an understanding which relates to all objects of the senses, but this only mediately, through intuition and its synthesis by means of the imagination, to which understanding all phenomena must consequently be subject, as data for a possible experience. But, as this relation of phenomena to possible experience is also necessary (because without this they would afford us no cognition, and not concern us at all), it follows, that the pure understanding, by means of the Categories, is a formal and synthetical principle of all experiences, and phenomena have a *necessary relation to the understanding*.

We shall now expound the necessary connexion of the understanding with phenomena by means of the Categories, by beginning from below—from the empirical extremity. The first thing given us is the phenomenon, which, if combined with consciousness, is called perception. (Without relation at least to a possible consciousness, the phenomenon could never be for us an object of cognition, and would hence be to us as nothing; having no objective reality, and only existing as known, it would be absolutely nothing at all.) But as every phenomenon contains a certain multiplicity—that is to say, as various perceptions are found within us, in themselves scattered and single—a connexion of them is necessary, and this they cannot have in mere sense. There is, then, within us an active faculty of the synthesis of this multiplicity, which we call the faculty of Imagination; and the action of which, when directed immediately upon the perceptions, I call apprehension.[1] The province of the imagination is to unite the manifold of intuition into an *image;* it must first, then, grasp the impressions actively, viz., *apprehend* them.

But it is clear that even this apprehension of the manifold by itself could produce no image, nor connexion of impressions, if there were not present a subjective condition for summoning a perception from which the mind had made a transition to the next, to join this next, and so produce whole series of these perceptions—in fact, if we did not possess a reproductive faculty of the imagination, which even then is only empirical. But representations, if they suggested one another just as they chanced to meet together originally, would have no determinate connexion, but be a mere confused crowd, from which could spring no cognition; their reproduction must therefore have a rule by which a representation enters into combination rather with this than with another representation in the imagination. This subjective and empirical cause of reproduction according to rules, we call the *association* of representations.

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[1] That the faculty of imagination is a necessary ingredient even in perception, has perhaps not as yet struck any psychologist. This arises partly from confining the faculty to mere reproductions; partly because it was thought that the senses not only gave us impressions, but even combined them, and so brought images of objects before us—a process which, nevertheless, most certainly requires somewhat besides the mere receptivity of impressions, namely, a function of their synthesis.

But if this unity of association had not also an objective basis, so as to make it impossible for phenomena to be apprehended by the imagination except under the condition of a possible synthetical unity of this apprehension, then it would also be quite contingent that phenomena, when combined, should be adapted to human cognitions. For although we had the faculty of associating perceptions, it would still be quite undetermined in itself, and accidental, whether they were also themselves capable of such association; and supposing they were not, a quantity of perceptions, and even a whole sensibility, would be possible, in which the mind might meet with a great deal of empirical consciousness, but disconnected, and without belonging to a *consciousness of myself*, which is nevertheless impossible. For it is only when I attribute all my perceptions to one consciousness (of pure apperception) that I can say I am conscious of them. There must, then, be an objective ground prior to any of the empirical laws of imagination, and *a priori*, on which depends the possibility—nay, even the necessity—of a law extending over all phenomena; which regards them universally to be such data of the senses as are in themselves associable, and subject to the general rules of a thoroughgoing connexion when reproduced. This objective basis of all association of representations I call *affinity*. We cannot meet it elsewhere than in the principle of the unity of apperception, as regards all cognitions which can belong to me. According to this principle, every phenomenon without exception must so enter the mind, or be apprehended, as to agree with the unity of apperception, which apperception would itself be impossible without synthetical unity in its connexion; this latter is, accordingly, also objectively necessary.

The objective unity of all (empirical) consciousness in one consciousness (of primitive apperception) is then the necessary condition even of all perception; and the affinity of all phenomena (proximate or remote) is the necessary consequence of a synthesis in the imagination, which is founded *a priori* upon rules.

The Imagination is then also a faculty of *a priori* synthesis, for which reason we give it the name of the productive imagination; and since, as far as it relates to the multiplicity of phenomena, it has no farther object than to produce the necessary unity in their synthesis, we may call it the transcendental function of the imagination. It is then sufficiently clear from what precedes, though it may sound rather strange, that only by means of the transcendental function of the imagination does even the affinity of phenomena, and with it their association, and through this, too, their reproduction in accordance with laws—in fact, does experience—become possible; because without it no concepts of objects would ever coalesce into one experience.

For the fixed and permanent *Ego* (of pure apperception) constitutes the correlatum of all our representations, so far as the mere possibility of becoming conscious of them; and all consciousness belongs just as much to an all-comprehensive pure apperception as all sensuous intuition (*qua* representation) belongs to a pure internal intuition—namely, that of time. It is, then, this apperception which must be added to the imagination, to render its function intellectual. For in itself the synthesis of imagination, though exercised *a priori*, is yet always sensuous, because it only combines the manifold as it appears in intuition—for example, the figure of a triangle. But it is only through the relation of the manifold to the unity of apperception that concepts can be formed, and this only by means of the imagination in relation to the sensuous intuition.

We have then the pure imagination, as an original faculty of the human soul, lying at the basis of all cognition *a priori*. By means of it we bring on the one side the multiplicity of intuition, and on the other the condition of the necessary unity of apperception, into mutual relation.[1] Both extremities—sensibility and understanding—must be necessarily connected by means of this transcendental function of the imagination; otherwise, there might indeed be appearances, but no objects of empirical cognition, or experience. Real experience, consisting of apprehension, association (of reproduction), and finally, of the recognition of phenomena, contains in this last and highest (merely empirical element of experience) concepts, which render possible the formal unity of experience, and with it all objective validity (truth) of empirical cognition. These fundamental causes of the recognition of multiplicity, so far as they concern merely the *form of experience in general*, are the very categories of which we are speaking. On them is founded not only all formal unity of the synthesis of the imagination, but through it the unity even of all that belongs to its empirical use (in recognition, reproduction, association, apprehension) down to phenomena; because it is only by means of these elements of our knowledge that phenomena can belong to our consciousness, and hence to ourselves.

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[1] From this point I have developed my explanation of the schematism of the Categories. M.

Thus the order and regularity in phenomena, which we call *nature*, we ourselves introduce, and should never find it there, if we, or the nature of our mind, had not placed it there. For this unity of nature must be a necessary unity of connexion; that is to say, certain *a priori*. But how could we possibly produce *a priori* a synthetical unity, if subjective foundations for such unity *a priori* were not contained in the original sources of knowledge in our mind, and if these subjective conditions were not at the same time objectively valid, by being the very basis of the possibility of cognising any object at all in experience?

We have already explained the *Understanding* in various ways: by a spontaneity of cognition (as opposed to the receptivity of sensibility), or by a faculty of thinking, or of concepts, or even of judgments—all of which explanations, if properly understood, coincide. We may now characterise it as the *faculty of rules*. This attribute is more fruitful, and explains its[1] nature better. Sensibility gives us forms (of intuition), but the understanding gives us rules. This latter is always occupied in hunting through phenomena, in order to find any rule they may present. Rules, so far as they are objective (or belong necessarily to the cognition of the object) are called laws. Although we learn many laws from experience, yet are these only particular determinations of higher laws, among which the highest (to which the rest are subordinate) are derived from the

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[1] The original is *derselben*, viz., *their* (the rules) nature. My emendation, *desselben*, seems necessary. M.

Understanding itself), and are not borrowed from experience, but rather render phenomena subject to law, and by this very means make experience itself possible. The understanding is, then, not merely a faculty of forming for itself rules by the comparison of phenomena; it is itself a code of laws for nature; that is to say, without the understanding there would be no nature at all, or synthetical unity of phenomena according to rules; for phenomena cannot, as such, take place without us, but exist only in our sensibility. But this [nature], as an object of knowledge in experience, with all that it may contain, is only possible in the unity of apperception. This unity of apperception is the transcendental basis of the necessary regularity of all phenomena in experience. The same unity in relation to the multiplicity of representations (that is to say, determining it from a single representation) is the rule, and the faculty of these rules is the understanding. Thus all phenomena, as possible objects of experience, lie *a priori* in the understanding, and receive from it their possibility, just as mere intuitions lie in the sensibility, and, as to form, are only possible through it.

However exaggerated or absurd, then, it may seem to assert that the understanding itself is the source of the laws of nature, and of the formal unity thereof, such an assertion is nevertheless equally correct and applicable to the object; that is, to experience. Empirical laws, indeed, as such, can by no means deduce their origin from the pure understanding, just as the infinite variety of phenomena could not be adequately conceived from the pure form of sensuous intuition.' But all empirical laws are only particular determinations of the pure laws of the understanding, under which, and according to the type of which, they first become possible; so that phenomena assume a fixed form, just as all phenomena, in spite of the variety of their empirical form, must nevertheless always accord with the conditions of the pure form of sensibility.

The pure understanding is, then, in the Categories, the law of the synthetical unity of all phenomena; and hence it first renders experience possible as to form.[1] But this was our whole aim throughout the transcendental deduction of the Categories, namely, this relation of the understanding to sensibility, and through it to all objects of experience; in fact, to render intelligible the objective validity of the pure concepts of the understanding, and so to establish their origin and truth.

SUMMARY STATEMENT OF THE LEGITIMACY AND POSSIBILITY OF THIS AND NO OTHER DEDUCTION OF THE PURE CONCEPTS OF THE UNDERSTANDING.

WERE the objects with which our knowledge is concerned things in themselves, we could not have any *a priori* concepts of them. For from whence could we obtain such concepts? Suppose we took them from the object (without pausing to investigate how this could become known to us at all), then our concepts would be merely empirical, and not *a priori*. Suppose we took them from ourselves, then that which is merely within us could not determine the nature of an object distinct from our representations; that is to say, it could not form a reason why there should exist a thing to which our thoughts should correspond, rather than that such representations should be totally void. On the contrary, if we are altogether concerned only with phenomena, it is not only possible, but even necessary, that certain *a priori* concepts should antecede the empirical cognition of objects. For, as phenomena, they produce an object which exists only in us, because a mere modification of our sensibility cannot exist without us. Now this very representation—that all these phenomena, and objects with which we can employ ourselves, are all in me; that is, are determinations of my identical self—this representation, I say, expresses their complete unity in one and the same apperception to be necessary. But in this unity of possible consciousness consists also the form of all cognition of objects (by which multiplicity is thought as belonging to *one* object). So that the way in which the manifold of sensuous representations (intuition) belongs to one consciousness, precedes all cognition of the object, as being its intellectual form, and even produces a formal cognition of all objects *a priori*, so far as they are thought (Categories). Their synthesis through the pure imagination, and the unity of all representations in relation to primitive apperception, precede all empirical cognition. Consequently, all pure concepts of the understanding are only for this reason possible—nay, even in relation to experience, necessary—that our knowledge is concerned with nothing but phenomena, the possibility of which lies within ourselves, and the conjunction and unity of which (in the representation of an object) are to be found only in ourselves; so that these must precede all experience, and make it even possible as to form. It is then on this, the only possible basis, that our deduction of the Categories has been constructed.

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[1] This important limitation saves Kant's system from absolute idealism. He never asserts that the matter of experience is created by the *Ego*. M.

APPENDIX B.

DISTINCTION BETWEEN NOUMENA AND PHENOMENA.

(*a.*) AFTER the words 'under such conceptions,' p. 181 (Ed. Bohn), the following paragraph occurs in the First Edition :—

'Above, in the exposition of the table of the Categories, we saved ourselves the trouble of defining each of them, because our object, which concerned merely their synthetical use, did not require it, and we should not, by needless undertakings, incur responsibilities which we can avoid. This was not an evasion, but an unavoidable rule of prudence, not to venture forthwith into definitions, and to attempt or pretend to completeness in the determinations of a concept, when one or two of its attributes suffice, without our requiring a complete enumeration of all that make up the whole concept. But it now appears that the ground of this precaution lies deeper, namely, that we could not define them if we wished to do so.[1] For, if we get rid of all the conditions of sensibility which mark them as concepts that can possibly be used empirically, and take them for concepts of things in general (that is, of transcendental application), then nothing farther can be done with them than to regard the logical function in judgments as the condition of the possibility of things themselves; without there being the least evidence how they could then have their application and object, or how they could then have any meaning and objective validity in the pure understanding, without intuition.'

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[1] I mean here real definition, which does not merely substitute for the name of a thing other more intelligible terms, but that which contains in it a distinct attribute by which the

(β.) Instead of the note on p. 182, the First Edition has the following note :—

'It appears somewhat strange, and even absurd, that there should be a concept which is to have a signification, but is not capable of any explanation. But the Categories have been here so peculiarly treated that, though they can only have a definite signification and reference to any object by means of the universal *sensuous condition*, yet this condition has been left out of the pure Category, which in consequence can contain nothing but the logical function of bringing the manifold under a concept. But from this function—that is, from the form of the concept alone—it cannot at all be known what object falls under it, because abstraction has been made from that very sensuous condition, owing to which alone objects in general can come under the

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object (*definitum*) can always be certainly recognised, and which renders the defined concept useful in application. The real explanation would then be that which makes distinct not only a concept, but at the same time its *objective reality*. Mathematical explanations, which present the object in accordance with the concept in intuition, are of this latter sort.

Category. Hence the Categories require, beyond the mere concept of the understanding, determinations of their application to sensibility in general (*schemata*), and without this are not concepts by which any object can be cognised and distinguished from another: they are rather so many ways of thinking an object for possible intuitions, and giving it its signification (under conditions yet to be supplied), according to some function of the understanding; that is, of *defining* it: but these Categories cannot themselves be defined. The logical functions of judgments in general—unity and plurality, affirmation and negation, subject and predicate—cannot be defined without arguing in a circle, because such definition cannot but be a judgment, and must therefore contain these functions. But the pure Categories are representations of things in general, so far as the diversity of their intuition must be thought through one or other of these logical functions: Quantity is the determination which can only be thought through a judgment having quantity (*judicium commune*); Reality, that which can only be thought through an affirmative judgment; Substance, that which, in reference to intuition, must be the ultimate subject of all other determinations. But what sort of things they are, in reference to which we must employ this function rather than that, still remains quite undetermined. So that the Categories, without the condition of sensuous intuition (provided they contain the synthesis), have no definite relation to any object, hence cannot define any such object, and have not, consequently, in themselves the validity of objective concepts.'

The passage commencing 'but there lurks' (p. 184), and ending '*negative* sense' (p. 186), was re-written in the Second Edition. Its original form was as follows:—

'Appearances, so far as they are conceived as objects, according to the unity of the Categories, are called *phenomena.* But if I assume things, which are merely the objects of the understanding, and which can, at the same time, be presented to an intuition, though not a sensuous one (as *coram intuitu intellectuali*), then such things would be called *noumena* (*intelligibilia*).

Now it might be imagined that the concept of phenomena, limited as it was in the transcendental Aesthetic, suggests of itself the objective reality of the *noumena,* and justifies the division of all objects into phenomena and noumena; and so of the world into one of sense and reason (*mundus sensibilis et intelligibilis*). And indeed the difference would not seem to be the logical form of the distinct or indistinct knowledge of one and the same object, but would start from the difference of the way in which they are given to our cognition, and according to which they must differ from one another in themselves generally. For if the senses represent something only as it appears, this something must surely be also a thing in itself, and the object of a non-sensuous intuition; that is, of the understanding. In such case there must be a cognition possible, in which no sensibility can be found, and which alone possesses absolutely objective reality, viz., by which objects are represented to us *as they are;* whereas, on the contrary, in the empirical use of our understanding, things are only cognised *as they appear.* Accordingly, beyond the empirical use of the Categories (which is restricted to sensuous conditions), there would be still a pure and objectively valid one; and we could not assert, as we have claimed to do so far, that our pure understanding-cognitions are nothing but principles of the exposition of appearance, and do not reach any further *a priori* than the formal possibility of experience; for here quite another field would lie open to us, as it were a world thought in the spirit (perhaps even intuited), upon which we could employ our understanding just as much, and far more nobly.

Now all our representations are, in fact, referred to some object by the understanding, as phenomena are nothing but representations; and so the understanding refers them to *something*, as the object of sensuous intuition; but this something is so far merely the transcendental object. But this signifies a something = x, of which we know nothing; nor can we (according to the present constitution of our understanding) know anything of it, as being that which can serve only as a correlate of the unity of apperception to obtain the unity of diversity in sensuous intuition, by means of which the understanding unites this diversity in the concept of an object. This transcendental object cannot be at all separated from the sensuous data, because then nothing remains by which it would be thought.[1]

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[1] This clause Kuno Fischer omits in his account of the matter (*Comm.*, p. 131), though it explains and limits Kant's meaning, in the passages quoted by him (pp. 190 and 195) in italics. Because nothing is left *for us*, when we subtract all the subjective conditions of the object, it does not follow that nothing *at all* remains. Hence, throughout this passage Kant never asserts the thing *per se* not to exist. His private

[This x then] is no object of cognition in itself, but only the representation of phenomena under the concept of an object in general, which is determinable by the diversity of the phenomena.

For this reason, the Categories do not represent any definite object given to the understanding alone, but only serve to determine the transcendental object (the concept of something in general), by what is given in sensibility, so as by it to cognise empirically phenomena under concepts of objects.

But as to the reason why we (not satisfied with the *substratum* of sensibility) have added noumena to the phenomena, which the pure understanding alone can think, it rests simply upon this: Sensibility and its sphere (viz., that of phenomena) are restricted by the understanding to this, that they shall concern not things *per se*, but only the way in which things appear to us according to our subjective constitution. This was the result of the whole transcendental Aesthetic; and it also follows naturally from the very concept of a phenomenon in general, that something must correspond to it which in itself is not phenomenon, because phenomenon can be nothing in itself beyond our faculty of representation; so that, unless we are involved in a perpetual circle, the very word phenomenon indicates a reference to something, the immediate representation of which indeed is sensuous, but which in itself, even without this constitution of our sensibility (upon which the form of our intuition is based), must still be some-

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opinion seems to have been that it did exist; and this is often *implied* in his language, though not dogmatically stated, being just as indemonstrable as the opposed doctrine. M.

thing; that is, an object independent of our sensibility.

Now from this originates the concept of a noumenon, which is, however, not at all positive, or a definite cognition of any particular thing, but only signifies the thought of something in general, by abstracting from all the form of sensuous intuition. But in order that a noumenon should signify a real object, to be distinguished from all phenomena, it is not enough for me to rid my thoughts of all the conditions of sensuous intuition; I must, over and above this, have some reason for assuming another sort of intuition than sensuous, to which such an object could be given: otherwise my thought, though not self-contradictory, is still void. We have, indeed, not been able to demonstrate in the text that sensuous intuition was the only possible one whatever, but merely that it was so *for us*; but neither were we able to prove that any other kind of intuition was possible; and although our thought can abstract from all sensibility, the question still remains to be settled—whether it is then anything but the mere form of a concept; and whether, when such abstraction is made, any object at all is left.[1]

The object to which I refer the phenomenon in general is the transcendental object; that is, the totally undetermined thought of *something* in general. This cannot be called the *noumenon ;* for I do not know what it is in itself, and have no concept of it at all, except as the object of sensuous intuition in general, which is, accordingly, of the same description for all phenomena. I cannot think it by means of any Category; for such is valid only of empirical intuition, in order to subject it to the concept of an object in general. A pure use of the Categories is indeed possible, or not contradictory, but has no objective validity, because it concerns no intuition on which it confers the unity of an object; for the Category is only a pure function of thought, by which no object can be given me, but by which I only think what is given in intuition.

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[1] Here is the question of absolute idealism explicitly raised; and the following paragraph proceeds, not to solve it dogmatically, but merely to show that no possible data can be found for settling the question. There being such total absence of proofs, may not the necessary suggestion of noumena by phenomena be allowed some weight? M.

APPENDIX C.

THE FIRST PARALOGISM OF SUBSTANTIALITY.[1]

THAT of which the representation is the absolute subject of our judgments, and which consequently cannot be used to determine anything else [as predicate], is *substance.*

I, as a thinking being, am the *absolute* subject of all my possible judgments, and this representation of myself cannot be used as the predicate of anything else.

Therefore I, as a thinking being (soul), am *substance.*

CRITICK OF THE FIRST PARALOGISM OF PURE PSYCHOLOGY.

WE have shown in the analytical part of the transcendental Logic that pure Categories (and among them that of Substance) have in themselves no objective meaning at all, except when based on an intuition, to the diversity of which they can be applied, as functions of the synthetical unity. Without this, they are merely functions of judgment, without content. Of anything in general, I may say it is substance, so far as I distinguish it from the mere predicates and determinations of things. Now in all our thinking, the *Ego* is the subject, in which thoughts inhere merely as determinations, and this *Ego* cannot be used to determine anything else. Consequently, every one must necessarily consider himself as the substance, and his thoughts as the accidents, of his existence, and determinations of his condition. But what use can I make of this notion of a substance? That I, as a thinking being, exist permanently; that I cannot naturally either originate or pass away—this I cannot at all infer from it, and yet it is the only use of the concept of the substantiality of my thinking subject, with which I could otherwise very well dispense.

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[1] The following discussion stood in the First Edition after the words 'predicaments of pure psychology' (p. 241).

We are so far from being able to conclude these properties from the mere pure Category of substance, that we are obliged to start from the permanence of an object derived from experience, if we wish to bring such an object under the empirically applicable concept of *substance.* Now, in the proposition we are discussing, we have not taken any experience for our basis, but have concluded simply from the concept of the relation which all thought has to the *Ego*, in which it inheres, as its common subject. Neither could we, supposing we desired to do it, establish such a permanence by any safe observation. For the *Ego* is present indeed in all thoughts; but there is not the least intuition connected with this representation, to distinguish it from other objects of intuition. We may then indeed perceive that this representation is ever recurring in every act of thought, but not that it is the fixed and permanent intuition in which thoughts (being transient) alternate.[1]

It follows, that the first syllogism of transcendental psychology only palms off upon us a pretended discovery, by setting up the continual logical subject of thinking as the cognition of the real subject of inherence. Of this latter we neither have, nor can have, the least knowledge, because consciousness is the only thing which makes all our representations thoughts, and wherein all our perceptions must be found, as their transcendental subject; and beyond this logical meaning of the *Ego*, we have no knowledge of the subject in itself, which lies as *substratum* at the basis of this [representation of self], as well as of all other thoughts. The proposition, then, *the soul is a substance*, may be allowed to stand, provided we keep in mind that this notion leads us no farther at all, nor can it teach us any of the usual conclusions of sophistical psychology; for example, its permanence through all changes, and even after death. It denotes then a substance only in Idea, but not in reality.

THE SECOND PARALOGISM, OF SIMPLICITY.

A THING, of which the action cannot be regarded as the concurrence of the action of several things, is *simple*.

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[1] He here approaches as closely as possible to the refutation of idealism in his Second Edition. According to the First Edition also, all change must take place in a permanent, [and (Second Edition) a permanent homogeneous with it]. This permanent is not the *Ego* [(First Edition, above;)] therefore, it must be an external permanent (Second Edition). M.

Now the soul, or thinking *Ego*, is such a thing.
Therefore, &c.

CRITICK OF THE SECOND PARALOGISM OF TRANSCENDENTAL PSYCHOLOGY.

THIS is the Achilles of all the dialectical syllogisms of pure psychology; not merely a play of sophistry ingeniously contrived by the dogmatical philosopher, to produce some show of argument for his assertions, but a conclusion which seems to withstand the most acute investigation, and the most circumspect consideration. Here it is:—

Every *composite* substance is an aggregate of many; and the action of any composite, or that which inheres in it as such, is the aggregate of many actions or accidents, divided among a number of substances. Now, an effect which arises from the concurrence of several acting substances is possible when this effect is merely external, (as, for instance, the motion of a body is the joint motion of all its parts). But the case is different with thoughts, which are accidents belonging internally to a thinking being. For supposing that this composite did think, each part of it would contain part of the thought; but all of them only when combined, the whole thought. Now this is contradictory. For since the representations which are contained under the different parts (suppose the individual words of a verse) are never [by themselves] a whole thought (a verse), so thought cannot be inherent in a composite as such. Thought, therefore, is only possible in a substance which is not an aggregate of many substances, but absolutely simple.[1]

The so-called *nervus probandi* of this argument lies in the proposition: that many representations must be contained in the absolute unity of the thinking subject, to make up one thought. But this proposition no one can prove *from concepts.* For how could he even commence his argument? The proposition: a thought can only be the effect of the absolute unity of the thinking being—cannot be treated analytically. For the unity of a thought which consists of many representations is collective, and, as far as pure concepts go, might just as well refer to the collective unity of the co-operating substances (like the motion of the body being the composite motion of its parts), as to the absolute unity of the subject. Proceeding then according to the law of identity, we cannot see the necessity of presupposing a simple substance to account for a composite thought. But that this proposition should be recognised synthetically and perfectly *a priori* from pure concepts, no one will venture to assert, who understands the basis of the possibility of synthetical *a priori* judgments, as already set forth.

Now it is equally impossible to deduce from experience this necessary unity of the subject, as the condition of the possibility of each single thought. For experience could give no necessity, and besides the concept of absolute unity is far beyond its sphere. Whence then do we get this proposition, on which the whole psychological syllogism rests?

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[1] It is very easy to give this proof in the usual scholastic form. But it is sufficient for my purpose to present its ground of proof, though merely in a popular form.

It is plain that, if we wish to represent a thinking being, we must put ourselves in its place, and so supply our own subject to the object which we wish to obtain (which is not the case in any other sort of investigation), and that we only demand the absolute unity of the subject, because otherwise we could not say: I think (the manifold of the representation). For, although the sum of the thought might be divided and distributed among many subjects, yet the subjective *Ego* cannot be divided or distributed, and this we certainly presuppose in all thinking.

Here, then, as in the previous paralogism, the formal proposition of apperception, *I think*, is also the whole basis, upon which rational psychology ventures to extend her cognitions—a proposition which is not experience, but merely the form of apperception, belonging to, and preceding, every experience. But with reference to possible cognition, this must be regarded merely as a *subjective condition*, which we have no right to exalt to a condition of the possibility of objects; that is, to a *concept* of a thinking being in general, [merely] because we cannot represent such a being to ourselves, without putting ourselves with the formula of our consciousness in the place of every other intelligent being.

The simplicity of myself (as a soul) is not really inferred from the proposition, I think; for it already exists in every thought. The proposition, *I am simple*, must be regarded as an immediate expression of apperception, just as the supposed Cartesian conclusion, *cogito, ergo sum*, is really tautological, as *cogito* (= *sum cogitans*) expressly asserts existence. *I am* [*a*] *simple* [*being*] means nothing but this—that the representation *I* does not contain the least multiplicity, and that it is an absolute (although merely logical) unity.

Consequently, this celebrated psychological demonstration is merely based upon the indivisible *unity* of a representation which only directs the verb [*cogitare*] to refer to a person. But it is plain that the subject of inherence is only indicated as transcendental by the *Ego* attached to the thought, without noting in the least any of its properties, and without knowing or cognising anything at all about it. It means something in general (a transcendental subject), the representation of which must indeed be simple, for the obvious reason that nothing at all is determined in it, since we cannot represent a thing more simply than by the notion of a mere something. But the fact of the simplicity of the representation of a subject is not, for that reason, a cognition of the simplicity of the subject itself; total abstraction being made from its properties, when it is merely indicated by the perfectly contentless expression *Ego* (which I can apply to every thinking subject).

So much is certain, that I represent to myself by *Ego* always an absolute, though only a logical, unity of the subject (Simplicity), but do not cognise through it the real simplicity of my subject. As the proposition, I am substance, means nothing but the pure Category, of which I can make no concrete use (empirically); so I may also be allowed to say, I am a simple substance, that is, one whose representation never contains a synthesis of multiplicity; but this concept, or even this proposition, does not give us the least information with regard to myself as an object of experience, because the concept of substance itself is only used as a function of synthesis, without being based on intuition—that is, without any object; so that it only applies to the condition of our knowledge, not to any object which we could name. Let us make an experiment with regard to the supposed use of this proposition.

Every one must confess that the assertion of the simple nature of the soul is merely of value so far as I am able by it to separate this subject from all matter, and consequently exempt it from decay, to which matter is always liable. It is for this use that the above proposition is specially intended, and it is therefore often thus expressed: The soul is not corporeal. Now if I can show that, even conceding to this cardinal proposition of rational psychology all objective validity (that all which thinks is simple substance), in the pure meaning of a mere judgment of the Reason (from pure Categories)—even conceding this, I say—not the least use can be made of it with reference to its dissimilarity or relation to matter, then I may fairly claim to have relegated this pretended philosophical truth into the region of pure Ideas, which are wanting in reality when objectively used.

We have proved irrefragably in our transcendental Aesthetic that bodies are mere phenomena of our external sense, and not things in themselves. In accordance with this we may say justly, that our thinking subject is not corporeal; viz., that as it is represented to us as an object of the internal sense, it cannot, so far as it thinks, be an object of the external senses, or a phenomenon in space. This is equivalent to saying: thinking beings, as such, can never be represented to us among external intuitions; or, we cannot intuite their thoughts, consciousness, desires, &c., externally; for all these must come before the internal sense. This argument indeed appears to be also the natural and popular one, which seems to have satisfied even the most ordinary understandings, so that from very early times they began to consider souls as totally distinct from bodies.

Now extension, incompressibility, connexion, and motion—in short, all that our external senses only can give us—are not, and indeed do not contain, thought, feeling, desire, or resolve, which are not at all objects of external intuition. Nevertheless, *that* something which lies at the basis of external phenomena—which so affects our sense as to give it the representations of space, matter, form, &c.—that something, I say, considered as a noumenon (or perhaps better as a transcendental object), might also at the same time be the subject of thoughts, although we may not be able to obtain any intuition of mental states (but only of space and its determinations), through the means by which our external sense is affected. But this something is not extended, impenetrable, or composite, because all these predicates only concern sensibility and its intuition, so far as we are affected by that sort of objects (otherwise unknown to us). Yet these expressions by no means declare to us what sort of an object it is, but only this, that the predicates of external phenomena cannot be applied to it, considered as an object in itself, and without reference to external senses. But the predicates of the internal sense—representation and thinking—do not contradict it. Consequently, even admitting the simplicity of its nature, the human soul is not at all proved to be distinct from matter, as regards their respective *substrata*, when considered (as it should be) merely as a phenomenon.

If matter were a thing *per se*, it would, as a composite being, be altogether different from the soul, as a simple being. But it is only an external phenomenon, of which the *substratum* is not cognised by any producible predicates. I might, then, be quite justified in assuming of this *substratum* that it was in itself simple, although in the way which it affects our senses it produces in us the intuition of extension, and, along with it, of composition. It might follow that this substance, to which extension is added by reference to our external sense, is accompanied by thoughts in itself, which through their own peculiar internal sense can be represented with consciousness. In this way the very same thing which in one relation is called corporeal, is at the same time in another called a thinking being, whose thoughts indeed we cannot intuite, but only their evidences, in phenomena. We should thus get rid of the expression, that souls only (as being a peculiar sort of substances) think; we should rather use the ordinary phrase, that men think; that is to say, that the very same thing which is extended as an external phenomenon, is internally (in itself) a subject not composite, but simple and thinking.

But, without admitting such hypotheses, we may observe in general, that if I mean by soul a thinking being *per se*, the very question is improper, if we mean to ask whether it is of the same kind, or not, as matter (which is not a thing *per se*, but only a sort of representation in us)? for it is self-evident that a thing *per se* must be of a different nature from the determinations which merely constitute its states.[1]

But, if we compare the thinking *Ego*, not with matter, but with the intelligible something at the basis of the external phenomena, which we call matter, as we know nothing of this latter, we cannot assert that the soul differs from it in any way internally.[1]

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[1] Cf. Fischer's *Commentary*, p. 56, *note*.

Accordingly, simple consciousness is not a cognition of the simple nature of our subject, so far as it is to be distinguished as such from matter as a composite existence.

But if this concept of simplicity is useless in the only case where it could be of service (that is, to determine the peculiar and distinguishing feature of our subject, when I compare myself with the objects of external experience), we may fairly despair of ever knowing that *I*, the soul (a name for the transcendental object of the internal sense), am simple. This expression has no application extending to real objects, and cannot possibly, therefore, enlarge our knowledge.

If these remarks are true, the whole of rational psychology falls to the ground with its principal support; and we can as little here as elsewhere hope to extend our information by pure concepts (still less by consciousness, the mere subjective form of all our concepts). More especially, the fundamental notion of *a simple nature* is such, that it cannot be found in any experience at all; so that there is no way of reaching it as an objectively valid concept.

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[1] The tone of the whole preceding passage corroborates the view I have taken of the intelligible and empirical characters, and shows that Kant (at least in his *opinions*) seems to have ascribed far more certainty and reality to the noumenon of internal, than to that of external, phenomena. At the same time, he never *asserts* this (because indemonstrable); it is also remarkable that, though he contemplates the possibility of noumenal monism, he never suggests the possibility of noumenal nihilism. M.

THE THIRD PARALOGISM, OF PERSONALITY.

THAT which is conscious of its own numerical identity at different times is, so far, a Person.

Now, the soul has this consciousness.

Therefore, it is a Person.

CRITICK OF THE THIRD PARALOGISM OF TRANSCENDENTAL PSYCHOLOGY.

IF I desire to cognise the numerical identity of an external object by experience, I pay attention to the permanent [part] of the phenomenon, to which, as subject, all the rest refers as determination, and remark the identity of the former in time, while the latter changes. But I am an object of the internal sense, and all time is merely the form of the internal sense. Consequently, I refer my successive modifications, one and all, to the numerically identical self in all time, that is, in the form of the internal intuition of myself. Upon this ground the personality of the soul should be regarded, not as an inference, but as a perfectly identical assertion of self-consciousness in time; and this, too, is the reason why it is valid *a priori*. For it says nothing but this: In all the time in which I am conscious of myself, I am conscious of this time, as belonging to the unity of myself; and it is indifferent whether I say, the whole of time is in me, who am an individual unity; or, I am, with my numerical identity, present in all this time.

Personal identity, then, must be always found in my own consciousness. But, if I consider myself from the point of view of another person (as an object of his external intuition), this observer external to me first of all considers *me in time;* for [though] in [my internal] apperception *time* is properly only represented *in me.*[1] He will, consequently, not conclude the objective permanence of my self from the *Ego*, which accompanies all representations at all times *in my consciousness*, and indeed with perfect identity, even though he concedes its presence. For, as the time in which the observer places me is not that which is met with in my sensibility, but in his, the identity which is necessarily bound up with my consciousness is not bound up with his, that is, with an external intuition of my subject.

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[1] Kant's argument appears to be as follows: When I regard my own internal phenomena, I find them to be all subject to the condition of *time;* but this time, again (and the phenomena in it), I perceive always as in me, as a form of my internal sensibility; hence, in [internal] apperception *self* is the highest condition, to which time is subject. For this reason the identity of self has been regarded as the necessary condition of my existence in time. This is true subjectively (in apperception), but not so objectively, or absolutely; for, suppose another man perceives me, he perceives me through his external sense, and I am [also] to him *in time.* But, though he readily admits and believes in my consciousness being accompanied with a full consciousness of identity, this identity is not to him the condition of the time in which *he* places me. He places *me in time*, instead of placing *time in me.* And the feeling of identity which he allows in me is to him no proof that my *self* is objectively permanent; for it is not necessarily implied by the time in which he places me. M.

The identity, then, of the consciousness of myself at different times is only a formal condition of my thoughts and their connexion, and does not demonstrate the numerical identity of my subject, in which, notwithstanding the logical identity of the *Ego*, such a change might have taken place as to preclude its [numerical] identity. We might nevertheless always attribute to it that *Ego*, which never varies in name, and which in every different state, even were the subject changed, could yet always preserve the thought of the previous subject, and hand it over to the succeeding.[1]

Although the proposition of some ancient schools—that everything is in a flux, and nothing permanent—cannot stand if we assume substances, it is not refuted by the unity of self-consciousness; for we ourselves cannot decide from our own consciousness whether we, as souls, are permanent or not, because we only consider *that* to belong to our identical selves, of which we are conscious; and so, of course, we judge necessarily that we are the very same in the whole time of which we are conscious. But from the point of view of a stranger we cannot hold this to be a valid inference; because, as we meet in the soul no permanent phenomenon except the representation self, which accompanies and connects all the rest, we can never ascertain whether this *Idea* (a mere thought) is not subject to the same flux as the remaining thoughts which are connected by it.

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[1] An elastic ball which strikes full upon a similar one imparts to it all its motion, or all its state (if we merely regard places in space). Now, let us assume substances after the analogy of such bodies, where each [reading *je*] imparts representations to the next, along with a consciousness of them. We might thus conceive a whole series of them, the first of which imparted its state, and the consciousness thereof, to the second; this again its own state, along with that of the first, to the third; this again its own and the states of all the previous ones, &c. In such a case the last substance would be conscious of all the states of the previously changed substances as its own, since those states were transferred to it along with the consciousness of them; nevertheless, it would not have been the very same person in all these states.

But it is remarkable that the personality, and the permanence which it presupposes—that is, the substantiality of the soul—*must now be proved first*; for, could we presuppose it, there would follow, not indeed the permanence of consciousness, but the possibility of a lasting consciousness in a permanent subject; and this is sufficient for personality, which need not itself cease, even though its action be interrupted for a time. But this permanence is not given us at all before the numerical identity of ourselves, which we infer from the identity of apperception, but is rather inferred from that identity (and after this, to make the argument valid, should follow the concept of substance, which is the only one of them that is of empirical use). Now, as this identity of person by no means follows from the identity of the *Ego* in all the time in which I cognise myself—so we already found that the substantiality of the soul could not be based upon it.

Nevertheless, the concept of personality (as well as that of substance and simplicity) may remain, so far as it is transcendental, and means an unity of the subject otherwise unknown to us, but in whose states there is thoroughgoing connexion through apperception. And so far indeed this concept is both necessary and sufficient for all practical uses; but we can never depend upon it to extend our self-cognition through pure Reason (which mirrors to us a permanence of the subject), from the mere concept of the identical self, as this concept always revolves about it itself, and does not assist in solving a single question which is based on synthetical cognition. What sort of thing *per se* (transcendental object) matter may be is wholly unknown to us; nevertheless, its permanence as phenomenon may be observed when it is represented as something external. But when I wish to observe the mere *Ego* in the alteration of all representations—as I have no other *correlatum* for my comparisons except the same identical self with the universal conditions of my consciousness—I can only give tautological answers to all questions by supplying my concept, and its unity, to those properties which I possess as an object, and so by assuming what was under investigation.

THE FOURTH PARALOGISM, OF IDEALITY (OF EXTERNAL RELATIONS).

WHATSOEVER can only be inferred to exist, as the cause of given perceptions, has only a *doubtful* [problematical] *existence.*

Now, all external phenomena are of such a kind that their present existence cannot be perceived immediately, but we infer them to exist as the cause of given perceptions.

Consequently, the existence of all the objects of the external senses is doubtful. This uncertainty I call the ideality of external phenomena; and the doctrine which holds this ideality is *idealism*, in contrast to which the assertion of a possible certainty of objects of the external senses is called *Dualism*.

CRITICK OF THE FOURTH PARALOGISM OF TRANSCENDENTAL PSYCHOLOGY.

WE shall first analyse the premises. We may justly assert that only what is within us can be immediately perceived, and that my own existence alone is the object of a bare perception. Consequently, the existence of a real object without me (if this word be used in an intellectual sense) is never given immediately in perception, but can only be added in thought to the perception (which is a modification of our internal sense) as its external cause, and so inferred from it. Consequently, Descartes justly restricted all perception in the strictest sense to the proposition, I (as a thinking being) exist; for it is clear that, as the external is not in me, it cannot possibly be found in my apperception, or in any perception, which is properly only a determination of apperception.

I cannot, then, properly perceive external things, but only infer their existence from my internal perception by regarding it as an effect, of which something external is the proximate cause. But the inference from a given effect to a determinate cause is always precarious, because the effect may have been produced by more than one cause.

Consequently, with regard to the relation of perception to its cause, it must ever remain doubtful whether such cause be internal or external—whether all so-called external perceptions are not a mere play of our internal sense, or whether they indeed refer to real external objects as their causes. At all events, the existence of the latter is only an inference, and runs the risk of all inferences; while, on the contrary, the object of the internal sense (I myself, with all my representations) is perceived immediately, and its existence can be in no doubt.[1]

By *idealist*, then, we must not understand the man who denies the existence of external objects, but only one who will not concede that it is known by immediate perception, and who concludes, accordingly, that we can never be absolutely certain of their reality by any possible experience.

Now, before I propound our paralogism in its delusive form, I must observe that we must necessarily distinguish two sorts of idealism—transcendental and empirical. By the *transcendental idealism* of all phenomena, I mean the doctrine according to which we regard them all as mere representations, not as things *per se*, and according to which space and time are merely sensuous forms of our intuition, not determinations given *per se*, or conditions of objects as things *per se*. Opposed to this doctrine is *transcendental Realism*, which regards space and time as something given *per se* (independent of our sensibility). The transcendental Realist, then, represents to himself external phenomena (if we allow their reality) as things *per se*, which exist independent of us and our sensibility, and should therefore also be without us according to pure concepts. This transcendental Realist is the proper man to turn empirical idealist; and, after he has falsely assumed of objects of our senses, that if they are to be external, they must possess existence in themselves apart from the senses, he then finds all the representations of our senses insufficient to guarantee the reality of these representations.[1]

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[1] This is the very question discussed in the much abused Refutation of Idealism, in the Second Edition. The definition of idealism which immediately follows above, shows how strictly Kant confined both this and the corresponding refutation in the later Editions to Descartes, and did not consider Berkeley, as Fischer and other Germans allege. M.

The transcendental idealist, on the contrary, can be an empirical Realist, or, as he is called, a *Dualist*; that is, he can concede the existence of matter without going beyond mere self-consciousness, or assuming anything beyond the certainty of the representations in me, or the *cogito ergo sum*. For since he considers this matter, and even its internal possibility, to be nothing but phenomenon, which apart from our sensibility is nothing at all; he only considers it as a kind of representations (intuition) which are called external, *not as if they referred to objects external in themselves*,[2] but because they refer perceptions to space, in which all things are reciprocally external, while space itself is within us.

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[1] Cf. Fischer's *Commentary*, p. 189.

[2] Kant here asserts the doctrine of transcendental idealism to be this: that external phenomena do not refer to objects in themselves external to us. From this Kuno Fischer infers (*loc. cit.*) that Kant denied any noumenon to exist as the (hidden)

We have declared ourselves in favour of this transcendental idealism throughout. Accepting our doctrine, all difficulty of admitting the existence of matter on the testimony of our mere consciousness vanishes, as well as of declaring it so proved, just as the existence of myself as a thinking being is so proved. For I am surely conscious of my representations; these then, and I who have them, exist. But external objects (bodies) are mere phenomena, and nothing at all but a species of my representations, the objects of which only exist through these representations, and apart from them are nothing. External things, therefore, exist just as much as I myself do, and both upon the immediate evidence of my self-consciousness; with this difference, that the representation of myself as a thinking subject is referred only to the internal sense, but the representations which denote extended existences are referred also to the external sense. With regard to the reality of external objects, I have just as little need of inference as with regard to the reality of the object of my internal sense (my thoughts); for they are both nothing but representations, the immediate perception (consciousness) of which is likewise a sufficient proof of their reality.[1]

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basis of external phenomena. This inference is unwarranted; for, in Kantian language, neither could the noumenon be called an *object*, nor *external* (in this sense); so that the present argument does not touch that question. Cf. below, p. 247. M.

[1] This is the precise doctrine of the refutation of idealism in

The transcendental idealist is then an empirical realist, and allows matter, as phenomenon, a reality which need not be inferred, but is immediately perceived. Transcendental Realism, on the other hand, necessarily becomes perplexed, and is forced to make way for empirical idealism, because it regards the objects of external senses as something distinct from the senses themselves, and mere phenomena as independent beings existing without us. However perfectly we may be conscious of our representation of these things, this is far from proving that, if the representation exists, its corresponding object must also exist; while on our system, these external things (or matter, in all its forms and changes) are nothing but mere phenomena, or representations in us, of whose reality we are immediately conscious.

As all the psychologists who subscribe to empirical idealism are, as far as I know, also transcendental realists, they have been perfectly consistent in attaching great weight to empirical idealism, as one of those problems which human reason can hardly solve. For, most assuredly, if we regard external phenomena as representations which are produced in us by their object—a thing *per se* existing without us—then how can its existence be known, except by inferring the cause

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the Second Edition (Ed. Bohn, p. 167). The concluding limitation is also there distinctly implied in the statement (p. 166) that the Aesthetic has removed all possibility of making space a property of things *per se*. 'For in such case both it and they become perfectly impossible and absurd.' Yet the argument which follows has been interpreted by all Kant's critics as implying this absurdity! M.

from the effect, in which case it must always remain doubtful whether this latter be within or without us. Now it may indeed be conceded that something is possibly the cause of our external intuitions, which is without us in the transcendental sense; but this is not the object which we understand by the representations of matter and corporeal things;[1] for these are mere phenomena—mere species of representation—which are in all cases only within us; and their reality rests upon immediate consciousness, just as the consciousness of my thoughts does. The transcendental object, as well of internal as of external intuition, is to us equally unknown. Not this however, but the empirical object, is in question, which is called *external* if *it is in space*—*internal*, if it is represented *in time-relations* only; but space and time are both only to be found *within us*.

But, as the expression *without us* is unavoidably ambiguous (meaning either that which exists as things *per se*, distinct from us, or merely that which belongs to *external phenomena*), in order to secure to this concept the latter meaning—being that in which the psychological question about the reality of our external intuition arises—we shall distinguish *empirically external* objects from those possibly so called in a transcendental sense, by denominating them simply things *which can be perceived in space.*

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[1] The theory which Kant is here opposing asserts that there are external objects, corresponding to, and resembling in some way, our perceptions. He does not here desire to refute his own doctrine, that there are possibly noumena at the basis of phenomena, but to prove that these noumena cannot be objects in space. If this be the meaning of his argument (which is somewhat obscurely expressed), Kuno Fischer is just as much mistaken in asserting that Kant here denies any special noumena for external phenomena, as he is in interpreting the 'Refutation of idealism' to be the assertion of noumena in space. M.

Space and Time are indeed representations *a priori*, present to us as forms of our sensuous intuition, before any real object has determined us by sensation to represent it under these sensuous relations. But this material or real something, which is to be intuited in space, necessarily presupposes perception,[1] and cannot be in any way imagined or produced independently of this perception, which announces the reality of something in space. It is then sensation which indicates reality in space and time, as soon as this sensation has been referred to either species of sensuous intuition. Sensation, when applied to an object in general, without determining it, is called perception. This sensation being given, by means of its divisibility we can imagine various objects which, beyond imagination, have no empirical place in space or time. Whatever examples then of sensations we take, whether pleasure or pain, or external ones like colour and heat, this remains quite certain, that perception is that through which the material must be given, in order to supply objects to sensuous intuition. This perception then (to keep to external intuitions at present), represents something real in space. For in the first place, perception is the representation of reality, as space is of the mere possibility, of simultaneous existence. Secondly, this reality is represented for the external sense; that is, in space. Thirdly, space itself is nothing but mere representation. Nothing then can be considered as real in space, except that which is represented in it;[1] and, *vice versa*, what is given in space (or represented through perception) is also real in it; for, were it not so—that is, were it not given immediately by empirical intuition—it could not be invented, because the real element in intuitions cannot at all be obtained by *a priori* thinking.

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[1] Here is an assertion expressly contradicting Kuno Fischer's doctrine that the external thing is (in itself) nothing but our sensation. It *presupposes*, as a necessary condition of being perceived, our faculty of perception, but cannot be asserted identical with it. The sequel is still more explicit. M.

All external perception, then, proves immediately that there is something real in space, or rather it is itself this very reality, and so far empirical realism is beyond question; that is to say, there corresponds to external intuitions something real in space. It is true that space itself, with all its phenomena, only exists within me; but nevertheless in this space reality, or the material of all objects of external intuition, is given really and independently of all invention. It is also impossible that in *this space* anything *without* us (in the transcendental sense) should be given, because space itself, apart from our sensibility, is nothing. The most extreme idealist cannot, then, call upon us to prove that the object without us (in the strict sense) corresponds to our perception. For if such a thing did exist, it could not be represented or intuited as without us, since this would presuppose space; and reality in space, as being the reality of a mere representation, is nothing but the perception itself. That which is real in external phenomena is only real in perception, nor can it be real in any other sense.

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[1] This paradoxical, but true, proposition should be carefully noted—viz., nothing is in space except what is represented in it. For space itself is nothing but representation; consequently, whatsoever is in space must be contained in the representation, and there is nothing at all in space except so far as it is really represented in it. The assertion, no doubt, sounds strange—that a thing can only exist in its own representation; but the absurdity is here obviated, since we are concerned not with things *per se*, but only with phenomena—*sc.* representations.

From perception we can produce objects, either by the play of fancy, or through experience. And so, no doubt, illusive representations may arise, not corresponding with objects, and we must ascribe this illusion either to images of the fancy (dreams), or to a mistake of the faculty of judgment (in the case of the so-called deceptions of the senses). To avoid these illusions, we proceed according to the following rule: *that which is connected with a perception according to empirical laws is real.*[1] But this illusion, as well as the caution against it, affects idealism, as well as dualism, since it only concerns the form of experience. In order to refute empirical idealism, which falsely questions the objective reality of external perceptions, it is enough that external perception should immediately prove reality in space, which space, although it be the mere form of representations, nevertheless possesses objective reality with regard to all external phenomena, which are nothing but representations. It is enough to show that without perception even invention and dreaming would be impossible; so that our external senses, as far as the data for experience are necessary, must have their real corresponding object in space.

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[1] The substance of this remark is repeated in the end of the note on the refutation of idealism, in the Second Preface (p. xli.) M.

The man who *denies* the existence of matter would be the *dogmatical idealist;* he who *doubts* it, because it cannot be proved, would be the *sceptical idealist.* The former theory results from believing that there are contradictions in the possibility of there being matter at all—a question with which we are not yet concerned. The following section, on dialectical syllogisms, which portrays the reason in internal conflict about the concepts which it has formed as regards the possibility of what belongs to connected experience, will help to solve that difficulty [of dogmatic idealism]. But the sceptical idealist, who only attacks the grounds of our assertion, and declares our conviction of the existence of matter to be insufficient—which we believe we can found on immediate perception—such a man is a benefactor to human reason, since he compels us, even in the most trifling steps of ordinary experience, to keep wide awake, and not to annex as lawful property anything that we have obtained by foul means. The use of these idealistic objections is now quite clear. They force us, if we wish to avoid confusion in our most ordinary assertions, to consider all perceptions, whether internal or external, as merely the consciousness of what belongs to our sensibility; and their external objects not as things *per se*; but only representations, of which we are as immediately conscious as of any other representations. They are only called external because they belong to that sense which we call the external sense, of which the intuition is space; and this space is nothing but an internal species of representation, in which certain perceptions are connected with one another.

Supposing we allowed external objects to be things *per se,* it would be absolutely impossible to comprehend how we could obtain a knowledge of their reality without us, since we rely merely on the representation which is within us. For, since no one can have a sensation without himself, but only within, the whole of self-consciousness gives us nothing but our own determinations. Consequently sceptical idealism compels us to take refuge in the only course still open—that is, in the ideality of all phenomena; and this we expounded in the transcendental Aesthetic, independent of the consequences, which we could not have then foreseen. If it be now asked, whether dualism must consequently follow in psychology, we answer, certainly, but only in the empirical sense; that is to say, in the connected whole of experience, matter, as substance in phenomena, is really given to the external sense, and the thinking *Ego* is also given to the internal sense, as substance in the phenomenon; and in both cases phenomena must be connected according to the rules which this Category [of substance] introduces into the connexion of our external as well as internal representations. But if we desire to widen, as is usual, the notion of dualism, and take it in its transcendental sense, then neither this doctrine, nor *Pneumatism*, nor *Materialism*, which oppose it from different sides, have the least basis. We should then miss the proper determination of our concepts, and consider a difference in the mode of representation of objects (which remain unknown to us, as to what they are in themselves) to be a difference in these things themselves. *I*, who am represented through the internal sense as in time, and *objects* without me, are indeed phenomena totally distinct in kind, but need not therefore be thought as distinct things. The *transcendental object*, which lies at the basis of internal intuition as well as of external phenomena, is neither matter, nor a thinking being *per se*, but a basis of phenomena unknown to us, and these give us the empirical concept as well of the first as of the second.

If then, as the present *Critick* plainly compels us, we keep faithfully to the rule we have established, not to push our questions any farther than possible experience has supplied us with objects for them, it will never even come into our heads to make investigations about the objects of our senses as to what they may be in themselves, out of relation to our senses. But if the psychologist takes phenomena for things in themselves, he may, as a materialist, accept for his doctrine nothing but matter; or, as a spiritualist, nothing but thinking beings (according to the form of our internal sense); or even, as a dualist, he may regard both to be things existing *per se*—his misconception will condemn him to be ever speculating how that is to exist *per se* which is no thing *per se*, but only the phenomena of a thing in general.

REFLECTION CONCERNING THE WHOLE OF PURE PSYCHOLOGY, AS AN APPENDIX TO THESE PARALOGISMS.

IF we contrast the *doctrine of the soul* [psychology], as the physiology of the internal sense, with the *science of bodies*—as the physiology of the objects of the external senses—we shall find (in addition to the fact that in both we know a great deal empirically) this remarkable difference, that in the latter science much can be cognised *a* *priori* from the mere concept of an extended incompressible being; whereas in the former, from the concept of a thinking being, nothing can be cognised synthetically *a priori*. Because although both are phenomena, yet the phenomenon presented to the external sense has something permanent[1] or fixed, which gives a *substratum* lying at the basis of changeable determinations, and so gives us a synthetical concept, namely, that of space and a phenomenon in it. Time, on the contrary, which is the only form of our internal intuition, has nothing permanent in it; so that it only lets us know the change of determinations, not the determinable object. For in that which we call the soul everything is in a continuous flux, and nothing is permanent except (if you *will* have it so) the *Ego*, which is perfectly simple, merely because this representation has no content or multiplicity; for which reason it seems to represent or, I should rather say, indicate a simple object. In order to produce a pure rational cognition of the nature of a thinking being in general, this *Ego* should be an intuition, which, being presupposed in all thinking (antecedent to any experience), should give us synthetical *a priori* propositions. But this *Ego* is just as little an intuition as it is a concept of any object, being merely the form of consciousness which can accompany both kinds of representations, and raise them to cognitions, so far as something else is given in intuition which supplies the material for the representation of an object. Thus all rational psychology falls to the ground, being a science surpassing all the powers of the human reason; and there remains nothing for us except to study our souls according to the clue given by experience, and to keep within the bounds of questions not exceeding the content which can possibly be given by internal experience.

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[1] This important passage again anticipates (almost verbally) the refutation of idealism of the Second Edition. It shows the superior dignity of external *experience*, as contrasted with internal, in affording us data for science. M.

But though this science gives us no ampliative knowledge, but is composed (when it attempts to do so) of nothing but paralogisms, yet we cannot deny it an important negative use, if we consider it as nothing but a critical treatment of our dialectical syllogisms, and indeed of the ordinary natural reason.

Why do we require a psychology founded upon pure principles of the Reason only? Without doubt, for the particular object of securing our thinking self from the danger of Materialism. This is done by the rational notion of our thinking self, which we have set forth; for, instead of there being any danger that if matter were taken away, all thinking—and even the existence of thinking beings—would consequently vanish, it is rather clearly shown that, if I take away the thinking subject, the whole world of matter must vanish, being only what appears in the sensibility of our subject, as a species of its representations.

Having proved this, I am of course not in the least better able to know this thinking self by its properties. Nay, I cannot even prove its existence to be independent of the transcendental *substratum* (whatever it is) of external phenomena; for both are to me unknown. Yet, as it is possible for me to find a reason in other than merely speculative grounds for hoping that my thinking nature will remain permanent in the midst of all possible changes of state—as this is possible, though I openly confess my own ignorance—an important point is gained, since I am able to repel the dogmatical attacks of speculative opponents, and show them that they can never know more of the nature of my thinking subject, to enable them to deny the possibility of my hopes, than I can, to enable me to maintain them.

On this transcendental illusion in our psychological concepts are based three additional dialectical questions, which form the proper object of rational psychology, and which can only be decided by the foregoing investigations. These are :—(*a*) The possibility of the community of the soul and an organic body; *i. e.* the animality of condition of the soul in this life; (β) The commencement of this community; *i. e.*, the state of the soul at and before birth; (γ) The end of this community; *i. e.*, the state of the soul at and after death (the question of immortality).

Now I assert that all the difficulties with which these questions are supposed to be beset, and with which, used as dogmatical objections, men pretend to a deeper insight into the nature of things than can be obtained by plain common sense—I say that all such difficulties are based on a mere delusion, by which what only exists in our thoughts is hypostatised, and, without its quality being changed, assumed to be a real object without the thinking subject: for example, extension, which is nothing but a phenomenon, is taken for a property of external things existing apart from our sensibility; and motion is taken for their action, taking place really in itself, even apart from our senses. For matter, the community of which with the soul raises such difficulties, is nothing but a mere form, or a certain species, of the representation of an unknown thing through that intuition which is called the external sense. There may indeed, then, be something without us to which this phenomenon, which we call matter, corresponds; but in the same quality as phenomenon it is not without us [in the transcendental sense], but merely a thought within us, although this thought (through the sense just mentioned) represents it as to be found without us.[1] Matter then signifies, not a species of substance, thus distinct and heterogeneous from the object of the internal sense (soul), but only the difference in kind of the phenomena of objects (in themselves unknown to us), whose representations we call external, as compared with those ascribed to the internal sense, even though the former belong just as much to the thinking subject as do all the rest of our thoughts. They have, however, this illusion about them, that as they represent objects in space, they as it were sever themselves from the soul, and seem to exist separate from it, although space itself, in which they are intuited, is nothing but a representation, the object of which, in the same quality, cannot be met at all without the soul. Accordingly, the question is no longer about the community of the soul with other known and heterogeneous substances without us, but merely concerning the connexion of the representations of the internal sense with the modifications of our external sensibility; and how it is that these are connected together according to constant laws, so as to form one systematic experience.

As long as we conjoin in experience internal and external phenomena as mere representations, we find nothing absurd or strange in the community of both species of sense. But as soon as we hypostatise external phenomena, and consider them no longer as representations, *but as things existing per se without us, in the same quality as they are in us*, and refer their activity, which they exhibit as phenomena in mutual relation, to our thinking subject—if we do this, we have a character of efficient causes without us, which will not tally with their effects in us, because the former refers merely to the external, the latter to the internal, sense; and, though these are united in one subject, they are still very different in kind. Here, then, we possess no external effects, except changes of place, and no forces except tendencies which concern relations in space as their effects. But within us the effects are thoughts, among which no relation of place, motion, figure, or any space-determination takes place; and we lose the clue to the causes altogether in the effects, which they should manifest in the internal sense. But we ought to remember that bodies are not objects *per se*, present to us, but a mere appearance of nobody-knows-what-sort-of unknown object; that motion is not the effect of this unknown cause, but merely the appearance of its influence on our senses; consequently, that both are not anything without us, but mere representations within us. It follows, that it is not the motion of matter which produces representations in us, but that this motion itself (and matter also, which makes itself cognoscible by this means) is mere representation; and, finally, that the whole difficulty we have conjured up amounts to this: how, and through what cause, the representations of our sensibility are so related, that those which we call external intuitions can be represented as objects without us, according to empirical laws. This question by no means contains the supposed difficulty of explaining the origin of the representations of causes which exist without us, and act in a foreign way—in that we take the appearances of an unknown cause to be a cause without us—a proceeding which can breed nothing but confusion. In those judgments where there occurs a misconception rooted in long habit, it is not possible to bring the correction [of the error] within our grasp, in the same degree as in those other cases where no such unavoidable illusion confuses our concepts. Hence this our emancipation of the reason from sophistical theories, can hardly as yet have the clearness which alone produces perfect satisfaction.

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[1] Here is a plain assertion of what I before explained, that Kant is refuting, not a thing *per se*, about which we can assert nothing, but such an absurdity as a noumenon in space. M.

I hope to make the matter plainer in the following way:—

All *objections* may be divided into *dogmatical*, *critical*, and *sceptical*. A dogmatical objection is directed against a *proposition*; a critical, against the *proof* of a proposition. The former presupposes an insight into the nature of an object, in order that we may be able to assert the reverse of what is stated concerning the object; such a proposition, then, is itself dogmatical, and professes to know more of the property in question than its opponent. The critical objection, as it never touches the truth or falsity of the proposition, and only attacks the proof, does not require, or pretend to, a better knowledge of the object than the opposed assertion; it only proves the assertion groundless—not that it is false. The sceptical objection opposes mutually the proposition and its contradictory, as objections of equal value, proposing each in turn as a dogma, and the other as the objection to it; and so appears to be from opposite sides dogmatical, in order to destroy completely any judgment about the object. Both the dogmatical and sceptical objections must pretend to so much insight into their objects as is necessary to assert something of them affirmatively or negatively. The critical alone differs from them, in that it overthrows the theory by showing that something worthless or purely imaginary has been assumed in its assertions, and by removing this supposed foundation, without wishing to assert anything concerning the nature of the object.

Now according to the ordinary notions of our reason as to the community in which our thinking subject stands with things without us, we are dogmatical, and regard them as real objects, existing independent of us, according to a transcendental dualism, which does not attribute these external phenomena, as representations, to the subject, but transports them, just as we get them from sensuous intuition, out of ourselves as objects, which this dualism separates completely from the thinking subject. This *subreptio* is the foundation of all theories as to the community between body and soul; and the question is never raised whether the objective reality of phenomena be certainly true: this is rather assumed as conceded, and fallacious reasonings started as to its explanation or conception. The three ordinary systems invented to meet this difficulty, and indeed the only possible ones, are those of *physical influence*, of *pre-established harmony*, and of *supernatural assistance.*

The two latter explanations of the community of the soul with matter are based upon objections to the first (which is the representation of common sense), namely, that what appears as matter cannot by immediate influence be the cause of representations, which are a perfectly heterogeneous sort of effect. But when men argue in this way [it is clear that] they cannot unite with the 'object of the external sensibility' the notion of a matter which is only phenomenon, or in itself mere representation, produced by any sort of external objects; for if they held this, they would have said that the representations of external objects (phenomena) cannot be external causes of phenomena in our minds—a senseless objection, for it never could come into any man's head to consider that what he had already acknowledged to be mere representation was an external cause. According to our principles, their theory must rather attempt to show that the true (transcendental) object of our external senses cannot be the cause of those representations (phenomena) which we understand by the word matter. Now, as no one can pretend with any reason to know aught of the transcendental cause of the representations of our external senses, their assertion is quite groundless. But, if the pretended correctors of the doctrine of physical influence regard matter as such (after the usual manner of transcendental dualism) to be a thing *per se* (and not the mere phenomenon of an unknown thing), and direct their objections to prove that such an external object, which exhibits no other sort of causality except motions, can never be the efficient cause of representations, but that a third being must interfere to produce, if not reciprocal action, at least correspondence or harmony between both; [if these theorists take this course] then their refutation of their opponents must begin by assuming the [same] *πρῶτον ψεῦδος* [as the theory] of physical influence in their own dualism; and so by their objection they would not so much refute Natural Influence as refute their own dualistic assumption. For all difficulties which beset the connexion of thinking nature with matter arise, without exception, merely from the insinuation of the dualistic representation, that matter as such is not phenomenon, or a mere representation of the mind, to which an unknown object corresponds, but is that object in itself, as it exists without us, and apart from all sensibility.

There can, then, be no dogmatical objection made to the usually accepted Physical Influence; for, if our opponent assumes that matter and its motion are mere phenomena, and therefore themselves mere representations, he can only raise this difficulty, that the unknown object of our sensibility cannot be the cause of representations in us—a thing which he has not the least right to assert, because nobody can tell of an unknown object what it can or cannot do. He must, however, after the proofs given above, necessarily concede this transcendental idealism, so far as he does not openly hypostatise representations, and place them, as real things, without himself.

But a well-founded *critical objection* can still be made to the common doctrine of physical influence. Such a pretended community between two kinds of substances—the thinking and the extended—presupposes a gross dualism, and makes the latter, which are nothing but mere representations of the thinking subject, into things existing *per se.* Physical influence thus misconceived may then be completely overthrown by showing its grounds of proof to be idle, and surreptitiously obtained.

The notable question concerning the community of that which thinks and that which is extended—if we discard all fictions—would simply come to this: *How external intuition*, viz., that of space (the occupation of it, figure and motion) *can be at all possible in a thinking subject?* But to this question no man can ever find an answer; and we can never supply this gap in our knowledge, but only indicate it by ascribing external phenomena to a transcendental object (as the cause of this sort of phenomena), which however we do not know, and of which we can never obtain any notion. In all problems which may arise in the field of experience we treat these phenomena as objects *per se*, without concerning ourselves about the highest ground [or condition] of their possibility. But, if we transgress this boundary, the concept of a transcendental object becomes necessary.

From these considerations about the community between extended and thinking beings there follows, as an immediate consequence, the settlement of all disputes or objections which concern the condition of this thinking nature before the community (this life), or after its cessation (in death). The opinion that the thinking subject could think previous to any community with the body would be thus expressed: that before the commencement of this sort of sensibility, by which something appears to us in space, the same transcendental objects—which in our present condition appear as bodies—may have been intuited quite differently. The opinion that the soul, after the cessation of all community with the corporeal world, can still continue to think, would announce itself in this form: that when the species of sensibility ceases by which transcendental—and now wholly unknown—objects appear to us, all intuition of them may not consequently vanish; and that it is quite possible for the same unknown objects to continue being cognised by the subject, though, of course, no longer in the quality of bodies.[1]

Now it is true that no one can show the smallest foundation for such an assertion from speculative principles, or even explain its possibility, but only presuppose it; yet on the other hand no one can oppose it with any valid dogmatical objection. For, whoever he may be, he knows no more of the absolute and internal cause of external or corporeal phenomena than I or anybody else. He cannot then reasonably pretend to know on what the reality of external phenomena depends in the present state (in life), nor consequently, that the condition of all external intuition, or even that the thinking subject itself, must cease to exist after this state (in death).

The whole dispute, then, about the nature of our thinking being and its connexion with the world of matter, merely arises from our supplying the gaps in our knowledge by paralogisms of the Reason, in that we make our thoughts to be things, and hypostatise them, whence arises an imaginary science, both as regards its affirmations and its negations. We either pretend to know something of objects, of which nobody has the least notion, or we consider our own representations to be objects, and so become involved in a perpetual circle of ambiguities and contradictions. Nothing but the sobriety of a severe but fair *Critick* can free us from this dogmatical illusion, which enslaves so many of us in fancied happiness under theories and sytems, and can restrict all our speculative claims to the field of possible experience—not indeed by ill-natured ridicule of our many failures, nor by pious laments about the limits of our reason; but by determining these limits accurately according to fixed principles. By this means its 'thus far, and no farther,' is most securely fixed at those pillars of Hercules which nature herself has set up, in order to allow the voyage of our reason to extend only as far as the receding coasts of experience reach—coasts that we cannot leave without venturing into a boundless ocean, which, after constant illusions, ultimately compels us to give up as hopeless all our laborious and tedious efforts.

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[1] To assert of the writer of the preceding argument that he is an absolute idealist is surely very strange criticism. It is impossible to conceive a more distinct and official refusal to accept that extreme doctrine. M.

We still owe to our reader a distinct and general explanation of the transcendental and yet natural illusion in the paralogisms of the pure Reason, as well as a justification of their systematic arrangement and their running parallel to the Categories. This we could not undertake at the commencement of the section without the danger of becoming obscure, or awkwardly anticipating ourselves. We now desire to discharge this obligation.

We can consider all illusion to consist in this—that the subjective condition of thinking is taken for the cognition of the object. We have farther shown, in the introduction to the transcendental Dialectic, that pure Reason is merely concerned with the totality of the synthesis of the conditions of a given conditioned.

Now, as the dialectical illusion of the pure Reason cannot be an empirical illusion, occurring with determinate empirical cognition, it must concern the conditions of thinking generally, and there can be only three cases of dialectical use of the pure Reason—

1. The synthesis of the conditions of a thought in general;
2. The synthesis of the conditions of empirical thinking;
3. The synthesis of the conditions of pure thinking.

In all these cases the pure Reason merely employs itself upon the absolute totality of this synthesis; that is, upon that condition which is itself unconditioned. On this division also is founded the threefold transcendental illusion, which gives rise to the three divisions of the dialectic, and affords the Idea to just as many apparent sciences arising out of pure Reason—to transcendental psychology, cosmology, and theology. We are here only concerned with the first.

As in the case of thinking in general we abstract from all relation of our thought to any object (be it of the senses, or of the pure understanding) the synthesis of the conditions of a thought in general (No. 1) is not at all objective, but merely a synthesis of the thought with the subject, which synthesis is falsely held to be a synthetical representation of an object.

But it follows from this, that the dialectical inference to the condition of all thinking in general, which is itself unconditioned, does not make a mistake as to content (for it abstracts from all content or object), but that it is merely false as to form, and must be called a paralogism.

Furthermore, as the condition which accompanies all thinking is the *Ego*, in the general proposition, 'I think,' Reason must be concerned with this condition, so far as it is itself unconditioned. But this is only the formal condition or logical unity of every thought, in which I abstract from all objects, and yet it is represented as an object which I think, that is, the *Ego* and its unconditioned unity.

Suppose any one were to put me the general question: Of what sort of nature is a thinking being? I do not in the least know how to answer the question *a priori*, because the answer must be synthetical (for an analytical answer might, perhaps, explain thinking, but could not extend our knowledge of that upon which thinking depends as to its possibility). But for every synthetical solution intuition is necessary, a point which is wholly passed over in the vague problem proposed. It is equally impossible to answer, in all its generality, the question: Of what nature must a thing capable of motion be? For incompressible extension (matter) is not then given to us. Yet, although I know no answer in general to that sort of question, it appears to me that I might give one in the special case of the proposition, 'I think,' which expresses consciousness. For this *Ego* is the first subject—that is, substance—it is simple, &c. But this must consist of mere empirical judgments, which, at the same time, could not contain any such predicates (which are not empirical), without a general rule to express the conditions of the possibility of thinking them in general, and this *a priori*.[1] Thus, what I at first thought so feasible (viz., judgments concerning the nature of the thinking being, and this from pure concepts), becomes suspicious, even though I have not yet discovered my mistake.

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[1] I now read *müsste*, and *könnten*, the sentence as it stands being perfectly incomprehensible; nor am I at all sure that I have discovered the proper emendation. M.

But the farther investigation into the origin of these properties, which I attribute to myself, as a thinking being in general, exposes the error. They are nothing more than pure Categories, by which I can never think a determined object, but only the unity of representations, in order to determine them as an object. Without being founded on an intuition, the Category alone can never provide me with a concept of an object; for only by intuition is the object given, which is afterwards thought in accordance with the Category. If I assert a thing in phenomena to be a substance, the predicates of its intuition must have been previously given to me, by which I distinguish the permanent from the changeable, and the *substratum* (thing in itself) from what is merely attached to it. If I call a thing in phenomena *simple*, I mean by this that its intuition, indeed, is part of my phenomena, but is itself not divisible, &c. But if anything is known to be simple only in concept, and not in appearance, then I have in reality no knowledge at all of the object, but only of my concept, which I frame about *something* in general, and which is not capable of being properly intuited. I only say that I think a thing to be quite simple, because I can really say nothing more about it, except merely that it is something.

Now, mere apperception (*Ego*) is in concept substance, is in concept simple, &c., and so far all these psychological dogmas have indisputable truth. Yet what we really want to know about the soul is not at all discoverable in this way; for, since all these predicates are not at all valid of intuition, and therefore can have no consequence applicable to objects of experience, they are quite void. For the above mentioned concept of substance does not teach me that the soul continues to exist by itself, nor that it is a part of the external intuitions, which cannot itself be further divided, and which can, consequently, neither originate nor pass away by any changes of nature: all of which are properties which would make the soul cognoscible to me in the connexion of experience, and might throw some light upon its origin and future state. But when I assert by the mere Category, that the soul is a simple substance, it is clear that as the mere concept of substance contains nothing but this, that a thing shall be represented as a subject *per se*, without also being the predicate of another, [it is clear, I say that] from this concept no permanence follows, and that the attribute of simplicity could certainly not add this permanence; so that we are not in the least informed of what might happen to the soul in the changes of the world. If we could be told that it is a *simple part of matter*, we might, owing to what experience tells us, infer permanence, and along with its simple nature indestructibility. But about this, the concept of the *Ego* in the psychological first principle (I think) tells us not a word.

The following is the reason that the being which thinks in us imagines it can cognise itself by pure Categories, and indeed by those which express absolute unity under each of their classes. Apperception is itself the ground of the possibility of the Categories, which on their side represent nothing but the synthesis of the manifold in intuition, so far as it has unity in apperception. Hence, self-consciousness in general is the representation of that which is the condition of all unity, and yet itself unconditioned. Of the thinking *Ego*, then, or soul (which represents itself as substance, simple, numerically identical at all times, and the *correlatum* of all existence, from which all other existence must be inferred), we may say, that it does not cognise *itself through the Categories*, but rather the Categories, and through them all objects in the absolute unity of apperception, viz., *through itself*. It is indeed quite plain that what I must presuppose in order to cognise any object at all, I cannot also cognise as an object; and that the determining *self* (thinking) is distinguished from the determinable self (the thinking subject), as cognition is from objects. Still nothing is more natural or seductive than the illusion of considering the unity in the synthesis of thoughts to be a perceived unity in the subject of these thoughts. We might call it the subreption of hypostatised consciousness (*apperceptionis substantiatæ*).[1]

If we wish to give its logical name to the paralogism in the dialectical syllogisms of rational psychology, so far as their premises are in themselves true, it may be called a *sophisma figuræ dictionis*, in which the major premiss makes merely a transcendental use of the Category with reference to its condition, but the minor premiss and conclusion make of the same Category an empirical use with reference to the soul, which has been subsumed under this condition. So, for example, in the paralogism of simplicity the concept of substance is a pure intellectual concept, which, without the condition of sensuous intuition is merely of transcendental, that is, of no, use. But in the minor premiss the very same concept is applied to the object of all internal experience, yet without first establishing and laying down as a basis the condition of its application *in concreto*—that is, its permanence; hence, there is here an empirical, though illegitimate, application made of it. In order to show the systematic connexion of all these dialectical assertions in a fallacious psychology, as connected in the pure Reason—that is, in order to show its completeness—observe that the apperception is carried through all the classes of the Categories, but only applied to those concepts of the understanding which in each [class] supply to the rest the basis of unity in a possible perception, and these are—subsistence, reality, unity (not plurality), and existence; only that Reason here represents them as the conditions of the possibility of a thinking being, which conditions are themselves conditioned. Consequently, the soul cognises itself as—

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[1] I cannot but think Mr. Mansel's theory of self being presented as substance is here clearly refuted. M.

1. The unconditioned unity of *Relation*; that is, not as inhering, but *subsisting*;
2. The unconditioned unity of *Quality*; that is, not as a real whole, but *simple*;[1]
3. The unconditioned unity in *plurality in time*; that is, not in different times numerically different, but as *one* and the very *same subject*;
4. The unconditioned unity of *existence in space*; that

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[1] How the simple here again corresponds to the Category of Reality, I am as yet unable to show; but it will be explained upon the occasion of another rational use of the very same concept.

is, not as the consciousness of several things without it, but *only of its own existence*, and of other things, on the contrary, merely as its *representations*.

Reason is the faculty of principles. The assertions of pure psychology do not contain empirical predicates of the soul, but those which, if they occur, should determine the object *per se* independent of experience—that is, through the pure Reason. They must, then, be fairly based upon principles and universal notions of thinking natures in general. Instead of this, we find that the single representation, *I am*, governs the whole of it, which, because it expresses the pure formula of all my experience (indeterminately), announces itself as an universal proposition, valid for all thinking beings; and, as it is single from every point of view, assumes the appearance of an absolute unity in the conditions of thinking in general, and so extends itself farther than possible experience can reach.

APPENDIX D.

[*Part of the 9th Section of the Antinomy of the Pure Reason.*]

POSSIBILITY OF CAUSALITY THROUGH FREEDOM IN HARMONY WITH THE UNIVERSAL LAW OF NATURAL NECESSITY.

That in an object of the senses which is not itself phenomenon, I term *intelligible*. If, accordingly, an object which must be regarded as a phenomenon in the sensuous world possesses in itself (or *per se*) also a faculty which is not an object of sensuous intuition, but by means of which it is capable of being the cause of phenomena, the *causality* of this existence may be regarded from two different points of view. The causality may be considered to be *intelligible*, as regards its *action*—the action of a thing in itself—and also *sensible*, as regards its *effects* as a phenomenon belonging to the sensuous world.

We should, accordingly, have to form both an empirical and an intellectual concept of the causality of such a subject, which both occur together in one and the same effect. This twofold manner of thinking the faculty of a sensuous thing does not run counter to any of the concepts which we ought to form of phenomena, or of possible experience; for as phenomena—not being things in themselves—must have a transcendental object as a foundation, which determines them as mere representations, there seems to be no reason why we should not ascribe to this transcendental object, in addition to the property by means of which it appears, a *causality* which is not a phenomenon, although its *effects* are observed in the world of phenomena.

But every efficient cause must possess a *character*—that is to say, a law of its causality—without which it would not be a cause at all. Accordingly, in a subject of the world of sense we should have an *empirical character*, which guaranteed that its actions, as phenomena, stand in complete and harmonious connexion, conformably to unvarying natural laws, with all other phenomena, and can be deduced from these as conditions; and that they do thus, in connexion with these, constitute members of a single series in the order of nature.

In the second place, we should be obliged to concede to it an *intelligible character* also, by means of which it is indeed the cause of those actions as phenomena, but which is not itself a phenomenon, nor subordinate to the conditions of the world of sense. The former may be termed the character of the thing as a phenomenon; the latter, the character of the thing as a thing *per se.*

Now this acting subject would, in its intelligible character, be subject to no conditions of time; for time is only a condition of phenomena, and not of things in themselves. No *action* would *begin* or *cease to be* in this subject; it would, consequently, be free from the law of all determination of time—of all change—namely, that everything *which happens* must have a cause in the *phenomena* (of the preceding state). In a word, the causality of the subject, in so far as it is intelligible, would not form a part of the series of empirical conditions which necessitated the event in the world of sense. Again, this intelligible character of a thing could indeed never be immediately cognised, because we can perceive nothing except so far as it appears, but it must still be thought in accordance [or analogy] with the empirical character; just as we find ourselves compelled in a general way, to place, in thought, a transcendental object at the basis of phenomena, although we know nothing of what it is in itself.

Accordingly, as to its empirical character, this subject, being a phenomenon, would be subject to the causal *nexus* in all the laws of its determination; and it would so far be nothing but a part of the world of sense, of which the results would irrevocably follow from nature, like every other phenomenon. When influenced by external phenomena—when cognised through experience in its empirical character, *i. e.*, in the law of its causality—all its actions must be explicable according to natural laws, and all the requisites for their complete and necessary determination must occur in possible experience.

By virtue of its intelligible character, on the other hand (although we possess only the general notion of this character), the subject must be regarded as free from all sensuous influences, and from all phenomenal determination. Moreover, as nothing happens in this subject—as far as it is a *noumenon*—and there does not, consequently, exist in it any change demanding the dynamical determination of time, and for the same reason no connexion with phenomena as its causes—this active existence must, in its actions, be so far free from and independent of natural necessity, for this necessity exists only in sensibility. It would be quite correct to say that it originates or begins its effects in the world of sense from itself without the action beginning in itself. We should not be in this case affirming that these sensuous effects began to exist of themselves, because they are always determined by prior empirical conditions, but only by virtue of the empirical character (which is the phenomenon of the intelligible character)—and are possible only as constituting a continuation of the series of natural causes. And thus nature and freedom—each in its complete signification—can meet, without contradiction or disagreement, in the same action, according as it is compared with its intelligible or sensible cause.

FURTHER ELUCIDATION OF THE COSMOLOGICAL IDEA OF FREEDOM IN HARMONY WITH THE UNIVERSAL LAW OF NATURAL NECESSITY.

I HAVE thought it advisable to lay before the reader at first a mere sketch of the solution of this transcendental problem, in order to enable him to form with greater ease a clear notion of the course which Reason must adopt in the solution. I shall now proceed to exhibit the several *momenta* of this solution, and to consider them in their order. The natural law, that everything which happens must have a cause; that the causality of this cause, that is, *the action* (which cannot always have existed, but must be itself an *event*, for it precedes in time some effect which has then *originated*), must have its cause among phenomena by which it is determined; and consequently, that all events are empirically determined in an order of nature—this law, I say, which lies at the foundation of the possibility of experience and of a connected system of phenomena, or *nature*, is a law of the understanding, from which no departure, and to which no exception, can be admitted. For to except even a single phenomenon from its operation is to exclude it from the sphere of possible experience, and make it a mere fiction of thought, or phantom of the brain.

Thus we are obliged to acknowledge the existence of a chain of causes, in the regress of which, however, *absolute totality* cannot be found. But we need not detain ourselves with this difficulty; for it has already been removed in our general discussion of the antinomy of the Reason, when it attempts to reach the unconditioned in the series of phenomena. If we permit ourselves to be deceived by the illusion of transcendental realism, we shall find that neither nature nor freedom remain. Here the only question is: Whether, admitting the existence of nothing but natural necessity in the whole series of the world of phenomena, it is possible to consider the same effect as on the one hand an effect of nature, and on the other an effect of freedom; or, whether these two species of causality are absolutely contradictory.

Among the causes in phenomena there can surely be nothing which could commence a series absolutely, and of itself. Every action, as phenomenon, so far as it produces an event, is itself an event or occurrence presupposing another state, in which its cause is to be found.

Thus everything that happens is but a continuation of the series; and no commencement, starting of itself, is here possible. The actions of natural causes are accordingly themselves effects, and presuppose causes preceding them in time. An *original* action—an action by which something happens which was not previously—is beyond the causal connexion of phenomena.

Now, is it absolutely necessary that, granting all effects to be phenomena, the causality of their cause, which (cause) is itself a phenomenon, must belong to the empirical world?[1] Is it not rather possible that, although for every effect in the phenomenon a connexion with its cause according to the laws of empirical causality is required, this empirical causality may be itself the effect of a cause, not empirical, but intelligible—its connexion with natural causes remaining, nevertheless, intact?

Such a causality would be considered, in reference to phenomena, as the original action of a cause which is in so far, therefore, not phenomenal, but, as regards this faculty, intelligible, although the cause must at the same time, as a link in the chain of nature, be regarded as belonging to the sensuous world.

A belief in the causality of phenomena among each other is necessary, if we are required to look for and give an account of the natural conditions of natural events; that is to say, their causes in phenomena. This being admitted as unexceptionably valid, the requirements of the understanding, which recognises nothing but nature, and is entitled to it, are satisfied; and our physical explanations may proceed in their regular course, without let or hindrance.

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[1] The reader will observe that Kant uses the word *cause* for the subject of the causality both noumenal and phenomenal, and distinctly speaks of the causality of a thing as different from the thing (cause) itself. Here he differs from Hamilton, and, I must add, agrees with common sense. M.

But it is no stumbling-block in the way, even assuming it to be a mere fiction, to admit that there are some[1] natural causes in the possession of a faculty which is only intelligible, inasmuch as it is not determined to action by empirical conditions, but solely upon grounds of the understanding; but so that the *action in the phenomenon* of this cause must be in accordance with all the laws of empirical causality.

Thus the acting subject, as a *causa phenomenon*, would continue to preserve a complete connexion with nature and natural conditions; and only the noumenon of this subject (with all its causality in the phenomenon) would contain certain conditions, which, if we ascend from the empirical to the *transcendental* object, must be regarded as merely intelligible. For if we attend, in our inquiries with regard to causes in the world of phenomena, to the directions of nature alone, we need not trouble ourselves about what sort of basis is conceived for these phenomena and their natural connexion in the transcendental subject (which is completely unknown to us).

This intelligible ground of phenomena does not concern empirical questions. Perhaps it has only to do with thinking in the pure understanding; and, although the effects of this thinking and acting of the pure understanding are discoverable in phenomena, these phenomena must, nevertheless, be capable of a full and complete explanation, in accordance with natural laws. And in this case we attend solely to their empirical (as the highest ground of explanation), and omit all consideration of their intelligible, character (which is the transcendental cause of the former), as completely unknown, except in so far as it is announced by the latter as its empirical symbol.

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[1] This is a distinct statement, and opposed to Kuno Fischer's account of the matter, *Comm.* p. 243. M.

Now let us apply this to experience. Man is one of the phenomena of the sensuous world, and so far also one of the natural causes, the causality of which must be regulated by empirical laws. As such, he must possess an empirical character, like all other objects of nature. We remark this empirical character in his effects, which reveal the presence of certain powers and faculties. If we consider inanimate or merely brute nature, we can discover no reason for conceiving any faculty to be determined otherwise than in a purely sensuous manner.

But man, to whom the rest of nature reveals herself only through sense, cognises himself (not only by his senses, but) also through pure apperception; and this in actions and internal determinings, which he cannot regard as sensuous impressions. He is thus to himself on the one hand indeed a phenomenon; but on the other, in respect of certain faculties, a purely intelligible object—intelligible, because its action cannot be ascribed to the receptivity of sensibility. We call these faculties understanding and Reason.

The latter, especially, is in a peculiar manner distinct from all empirically-conditioned faculties; for it considers its objects merely in accordance with Ideas, and by means of these determines the understanding, which then proceeds to make an empirical use of its concepts, which indeed are also pure.[1]

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[1] The remainder of the discussion is rendered much less inaccurately by Mr. Meiklejohn (pp. 338, *sqq.* I have, therefore, not thought it necessary to repeat it here. M.

THE END.

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